DOCUMENT RESUME

ED 219 855 EA 014 886

AUTHOR	Pearce, Jonathan
TITLE	Influence of Education Journals on the Classroom Practice of California Public High School Department Heads.
PUB DATE	Oct 81
NOTE	260p.
EDRS PRICE	MF01/PC11 Plus Postage.
DESCRIPTORS	*Classroom Techniques; *Department Heads; High Schools; *Instructional Innovation; Interprofessional Relationship; *Periodicals; Professional Associations; Questionnaires; Reading Ability; State Surveys; Tables (Data)
IDENTIFIERS	*California

ABSTRACT

To discover whether professional journals stimulate changes in classroom practices among California public high school department heads, the author reviewed the literature and conducted a questionnaire survey of a stratified random sample of department heads in English, mathematics, physical education, science, and social science. The 549 respondents (43 percent of the sample) supplied data on their school's size, urban or rural location, and enrollment trends and on their own academic field, experience as head, responsibilities, innovativeness, initiation of change, reading ability, and reasons for reading or not reading journals. Analysis of both the main sample and two smaller comparative samples, using crosstabulations and analysis of variance, indicated that journals have only a modest influence on the heads' classroom practices, chiefly on curriculum and teaching techniques and mostly in science. Department heads, the data showed, read mostly journals in their own field and use discussions to share information with colleagues. Those most influenced by journals are recent department heads who are members of professional organizations and who perceive themselves as innovative and as good readers. Extensive appendices provide copies of the questionnaire, various cover letters, and lists of journals read and organizations joined. (Author/RW)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☒ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

- Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
Jonathan Pearce

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

ED219855

INFLUENCE OF EDUCATION JOURNALS ON THE CLASSROOM PRACTICE OF CALIFORNIA PUBLIC HIGH SCHOOL DEPARTMENT HEADS

by

Jonathan Pearce

Lincoln Unified School District
2010 West Swain Road
Stockton, CA 95207
(209) 473-5414

October 1981

EA 014 886

© 1981 Jonathan Pearce

ACKNOWLEDGEMENTS

The writer is grateful to committee chairperson Michael B. Gilbert for his advice and assistance and to the committee members, who were most generous with their guidance. The writer is thankful for the advice of Professor Bobby R. Hopkins and the assistance of Dr. Valliolah Farzad.

The writer is grateful for the endorsement of the study by the Association of California School Administrators. The hundreds of California high school department heads who participated, and the superintendents, principals, and school secretaries who facilitated the project deserve thanks. The courtesy and advice of professional colleagues in the pilot-testing of the instrument used in the study is much appreciated.

The writer is especially grateful to Dr. Tod A. Anton for his encouragement and his constant, extraordinary support throughout the writer's doctoral candidacy.

CONTENTS

Page

ACKNOWLEDGEMENTS iv

LIST OF TABLES xi

Chapter

1. OVERVIEW OF THE STUDY 1

THE PROBLEM 7

Statement of the Problem 8
The Objectives of the Study 9
The Questions Presented by the Study 9
Hypotheses to Be Tested 11
The Significance of the Study 12

PROCEDURES FOR THE STUDY 13

The Research Design 13
Definition of Terms 13
Delimitations of the Study 15
Sources of the Data 17
Data-Gathering Processes 18
The Nature of the Instrument 19

The instrument was valid 20
The instrument was reliable 20

Nature of the Requested Responses 21
Treatment of the Data 21

SUMMARY 21

Outcomes of the Study 22
Organization of the Remainder of the Study . . 22

2. REVIEW OF THE LITERATURE 24

The Nature of Educational Change 24

Change processes are ambiguous 25
Change is difficult 27
Change is slow 28
Change may be frightening 29
Change is complex 30
Change strategies can be characterized . . . 33

CONTENTS (Continued)

Chapter Page

2. REVIEW OF THE LITERATURE (Continued)

Change can be described structurally 34
Some change models are defective 35
One change model is especially popular . . . 36

Stimulants to Change in Education 37

District-level support is needed 37
Innovation can be erroneous 38
Change is an individual matter 40
Universities may stimulate change 41

The Inhibitors of Change 41

Negative influences are many 42
Teachers influence themselves 44
Teachers often work alone 45
Departmentalization is not always best . . . 46
The classroom itself may be an inhibitor . . 47
Communication may be poor 47
Personal limitations are probably a factor . 49
Educators may not wish to change 51
Risk-taking may be seen as hazardous 51
Labor contracts can inhibit change 54
Prejudices operate as inhibitors 54
Censorship precludes change 54

The Education Journal as Change Source and Agent 55

Teachers may reject textbooks 56
Teachers evidently prefer practical reading 58
Journals are key information sources 59
Journal articles vary in perceived worth . . 61

The Nature of the Reading of Educators in a National Context 62

The Reading Practices of Other Nationals . . . 65

The Educator as Professional 67

Professionalism and the Responsibility to Read 69

Educators need to become experts 70
Journals offer professional opportunity . . . 71

Other Professionals and Their Reading 74

The Quality of Preparation for Reading among Educators 76

CONTENTS (Continued)

Chapter Page

2. REVIEW OF THE LITERATURE (Continued)

Reading Habits of Public School Educators . . . 79
Excuses for Not Reading 81

SUMMARY 83

3. METHODOLOGY 87

The Population and Sample 87
The Subsample 90
The first subsample was the organized sample of non-respondents 91
The second subsample was the organized sample of alternate respondents 91
The Instrument and Its Development 92
Questionnaire items corresponded with the questions of the study 92
The questionnaire was pilot-tested 96
The Data-Gathering Procedures 96
Organization of the Data 99
Analysis of the Data 100

SUMMARY 100

4. PRESENTATION AND ANALYSIS OF THE DATA 102

THE RESPONDENTS 103
The Representativeness of the Respondents . . 103
Other Selected Characteristics of the Respondents 107
The Alternate and Non-Respondent Subsamples . 116

RESPONSES TO THE QUESTIONS OF THE STUDY 117
Question 1: What Are the Changes in Practice That Department Heads Report Have Been Stimulated by Journal Literature? 117
Question 2: Are Journal-Influenced Changes in Practice Experienced Equally by the Departments Selected for Study? 119
Question 3: Which Publications Do High School Department Heads Cite as Having Most Direct or Practical Value in Their Classroom Practice? 126

CONTENTS (Continued)

Chapter Page

4. PRESENTATION AND ANALYSIS OF THE DATA (Continued)

Question 4: Does Department Head Membership in Journal-Publishing Professional Organizations Relate to Reported Changes in Practice? 133

Question 5: How Frequent among Department Heads Is the Sharing with Colleagues of Journal and Other Information about Classroom Practice? 146

Question 6: Is There A Complex of Professional and Personal Characteristics That Appears to Typify the Department Heads Who Report Journal-Influenced Change in Their Classroom Practice? 151

5. SUMMARY, DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS 174

SUMMARY 174

DISCUSSION 177

Question 1: What Are the Changes in Practice That Department Heads Report Have Been Stimulated by Journal Literature? 177

Question 2: Are Journal-Influenced Changes in Practice Experienced Equally by the Departments Selected for Study? 179

Question 3: Which Publications Do High School Department Heads Cite as Having Most Direct or Practical Value in Their Classroom Practice? 182

Question 4: Does Department Head Membership in Journal-Publishing Professional Organizations Relate to Reported Changes in Practice? 186

Question 5: How Frequent among Department Heads Is the Sharing with Colleagues of Journal and Other Information about Classroom Practice? 187

CONTENTS (Continued)

Chapter Page

5. SUMMARY, DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS (Continued)

Question 6: Is There a Complex of Professional and Personal Characteristics That Appears to Typify the Department Heads Who Report Journal-Influenced Change in Their Classroom Practice? 188

The Subsamples Provided Little Data Contrast 192

CONCLUSIONS 192

RECOMMENDATIONS FOR FURTHER STUDY 194

A FINAL COMMENT 195

BIBLIOGRAPHY 197

APPENDICES

A. QUESTIONNAIRE 217

B. SUPERINTENDENT LETTER 221

C. SUPERINTENDENT CARD 223

D. SUPERINTENDENT-PRINCIPAL LETTER 224

E. SUPERINTENDENT-PRINCIPAL CARD 225

F. ADVISOR SUPPORT LETTER 226

G. PRINCIPAL LETTER 227

H. PRINCIPAL CARD 228

I. PRINCIPAL REMINDER LETTER 229

J. ACSA ENDORSEMENT LETTER 230

K. DEPARTMENT HEAD NOTE 231

L. DEPARTMENT HEAD NOTE, MODIFIED 232

CONTENTS (Continued)

Chapter Page

APPENDICES

M. REMINDER CARD 233

N. SPECIAL APPEAL LETTER 234

O. CHANGES IN PRACTICE, ALL STIMULI 235

P. TITLES OF PUBLICATIONS REPORTED

English, Mathematics 236
Physical Education 237
Science 238
Social Science, Other Curriculum Journals . 239
General Education, General Interest 240

Q. PROFESSIONAL ASSOCIATION MEMBERSHIPS REPORTED

English, Mathematics 241
Physical Education, Science 242
Social Science, Other Subject Matter . . . 243
General Education, Other Reported 244

LIST OF TABLES

Tables Page

3.1 California High Schools in 1979-80 Distributed by Size of Student Population 88

3.2 Number of Randomly-Selected California High Schools Identified by Stratum 90

4.1 Responses Distributed by Population Strata 104

4.2 Respondents Distributed by Leadership Responsibility 105

4.3 Percentage Relationship of the Sample with Its Component Departments and with the Subsamples 106

4.4 Gender of the Department Heads 107

4.5 Length of Service in Leadership Positions of Department Heads 108

4.6 School Setting of the Department Heads 108

4.7 School Enrollment Status of the Department Heads 109

4.8 Self-Assessed Innovativeness and Professional Currency of Department Heads 110

4.9 Whether Department Heads Designed New Courses or Units 111

4.10 Whether Department Heads Supervised a Beginning Teacher or Student Teacher 111

4.11 Whether Department Heads Initiated One or More Classroom Changes 112

4.12 Self-Assessed Reading Ability of Department Heads 113

4.13 Reasons Given by Department Heads for Not Reading Journals 115

4.14 Journal-Stimulated Changes in Practice Reported by All Department Heads 118

LIST OF TABLES (Continued)

Tables Page

4.15 Journal-Stimulated Changes in Practice Reported by English Department Heads 120

4.16 Journal-Stimulated Changes in Practice Reported by Mathematics Department Heads 121

4.17 Journal-Stimulated Changes in Practice Reported by Physical Education Department Heads 122

4.18 Journal-Stimulated Changes in Practice Reported by Science Department Heads 123

4.19 Journal-Stimulated Changes in Practice Reported by Social Science Department Heads 124

4.20 Journal-Stimulated Changes in Practice Reported by Other Department Heads 125

4.21 Citations of Publications Reported by All Department Heads as Having Direct and Indirect Value in Stimulating Change in Classroom Practice 128

4.22 All Sources of Reported Changes in Classroom Practice 130

4.23 Membership of All Department Heads in Professional Associations 135

4.24 Frequency Index for All Department Heads between Their Changes in Practice and Their Membership in Professional Associations 138

4.25 Frequency Index for English Department Heads between Their Changes in Practice and Their Membership in Professional Associations 140

4.26 Frequency Index for Mathematics Department Heads between Their Changes in Practice and Their Membership in Professional Associations . 141

4.27 Frequency Index for Physical Education Department Heads between Their Changes in Practice and Their Membership in Professional Associations 142

LIST OF TABLES (Continued)

Tables Page

4.28 Frequency Index for Science Department Heads between Their Changes in Practice and Their Membership in Professional Associations 143

4.29 Frequency Index for Social Science Department Heads between Their Changes in Practice and Their Membership in Professional Associations 144

4.30 Frequency Index for Other Department Heads between Their Changes in Practice and Their Membership in Professional Associations 145

4.31 Methods of Sharing Curriculum Information Rated by All Department Heads 147

4.32 Methods of Sharing Curriculum Information Rated by English Department Heads 148

4.33 Methods of Sharing Curriculum Information Rated by Mathematics Department Heads 148

4.34 Methods of Sharing Curriculum Information Rated by Physical Education Department Heads 149

4.35 Methods of Sharing Curriculum Information Rated by Science Department Heads 149

4.36 Methods of Sharing Curriculum Information Rated by Social Science Department Heads 150

4.37 Methods of Sharing Curriculum Information Rated by Other Department Heads 150

4.38 School Population Strata of Department Heads Who Reported Journal-Influenced Change 152

4.39 Subject-Area Leadership Responsibility of Department Heads Who Reported Journal-Influenced Change 152

4.40 Gender of Department Heads Who Reported Journal-Influenced Change 153

LIST OF TABLES (Continued)

Tables Page

4.41 Length of Service of Department Heads Who Reported Journal-Influenced Change 153

4.42 School Setting of Department Heads Who Reported Journal-Influenced Change 154

4.43 School Enrollment Status of Department Heads Who Reported Journal-Influenced Change 155

4.44 Self-Assessed Innovativeness of Department Heads Who Reported Journal-Influenced Change 156

4.45 Summary for the Analysis of Variance for All Department Heads for Self-Assessed Innovation and Professional Growth 157

4.46 Whether Department Heads Who Reported Journal-Influenced Change Had Designed New Courses or Units 158

4.47 Whether Department Heads Who Reported Journal-Influenced Change Had Supervised Beginning/Student Teachers 158

4.48 Self-Assessed Reading Ability of Department Heads Who Reported Journal-Influenced Change 159

4.49 Summary for the Analysis of Variance for All Department Heads for Self-Assessed Reading Ability 160

4.50 Whether Department Heads Who Reported Journal-Influenced Change Had Initiated Classroom Change 161

4.51 Summary for the Analysis of Variance for All Department Heads for Initiation of Change in Classroom Practice 162

4.52 Self-Assessed Journal Use of Department Heads Who Reported Journal-Influenced Changes 163

4.53 Changes in Their Own Practice Identified by Department Heads Who Reported Journal-Influenced Change 164

4.54 Sources of Change Identified by Department Heads Who Reported Journal-Influenced Change 165

LIST OF TABLES (Continued)

Tables Page

4.55 Journals Having Direct, Practical Value Identified by Department Heads Who Reported Journal-Influenced Change . . 166

4.56 Journals Having Indirect Value Identified by Department Heads Who Reported Journal-Influenced Change 167

4.57 Professional Association Membership of Department Heads Who Reported Journal-Influenced Change 168

4.58 Opinion of Article Circulation as Information-Sharing Mode by Department Heads Who Reported Journal-Influenced Change 169

4.59 Opinion of Other Materials Circulation as Information-Sharing Mode by Department Heads Who Reported Journal-Influenced Change 169

4.60 Opinion of Discussion as Information-Sharing Mode by Department Heads Who Reported Journal-Influenced Change 170

4.61 Opinion of Circulated Memoranda as Information-Sharing Mode by Department Heads Who Reported Journal-Influenced Change 170

4.62 Reasons for Reading Journals Given by Department Heads Who Reported Journal-Influenced Change 171

Chapter 1

OVERVIEW OF THE PRESENT STUDY

Change in educational processes is a many-faceted and complex phenomenon whether at national level or in one teacher's classroom. Whereas change is often perceived as desirable and necessary,[1] even the prospect of change may inspire controversy.[2] Educators may accept the idea of change as inevitable in all things, but proposed change in educational practice often stimulates extraordinary resistance.[3,4] The processes of change have been defined in a variety of terms and models by scholars. For example, Chin and Benne[5] identified in considerable detail three such change types which they termed empirical-rational, normative-re-educative, and power-based.

---

[1] Ben M. Harris and Leonard A. Valverde, "Supervisors and Educational Change," Theory Into Practice, XI (October, 1976), p. 272.

[2] Kenneth D. Benne, Warren G. Bennis, and Robert Chin, "Planned Change in America," The Planning of Change, eds. Warren G. Bennis, et al. (3d ed.; New York: Holt, Rinehart and Winston, 1976), p. 13.

[3] James Burke, "The Trigger Effect," Connections, Public Broadcasting System (January 9, 1980).

[4] Manfred Bayer and Gerhard E. Ortner, "Professional Development of Educational Administration: Fundamentals and Applications," Educational Administration (Winter, 1979), p. 91.

[5] Robert Chin and K. D. Benne, "General Strategies for Effecting Changes in Human Systems," in Bennis, et al., op. cit., pp. 23-24.

A variety of factors may serve to inhibit change in educational practice. Educational practitioners are dependent on published materials; non-publication of such necessary materials will inhibit change in practice.[6] Change in practice may be inhibited in a most profound way when educators do not receive, by whatever medium, the information required to stimulate or implement a desired outcome.[7] Effective practices may not be implemented for other, personal reasons discussed in detail below.[8] The effects of change are perceived personally,[9] and perceivers tend to interpret idiosyncratically.[10] That is, change in educational practice intended by its originators to serve specific purposes may suffer odd, even grotesque, applications in a school setting and become unidentifiable to outsiders.

---

[6] William Lowe Boyd, "The Politics of Curriculum Change and Stability," Educational Researcher, VIII (February, 1979), p. 16.

[7] John W. Gardner, Excellence (New York: Harper and Row, 1962), p. 35.

[8] Boyd, loc. cit.

[9] Susan Loucks and Harold Pratt, "A Concerns-Based Approach to Curriculum Change," Educational Leadership, XXXVII (December, 1979), p. 214.

[10] George Leonard, The Transformation (New York: Delacorte, 1972), p. 117.

The decision making that culminates in effective change in classroom practice must be actively supported and must involve professionals at a variety of levels.[11] Some investigators underscore as erroneous the assumption that change in practice is essentially the result of a piece of legislation or an administrative decision.[12] Individuals, they say, not institutions, accomplish change.[13] Because schooling practices are reputedly so resistant to change,[14] innovations of any degree require much understanding by individual school staff members.[15,16] And to be effective, changes require time to work.[17] Educational changes require that much of the decision making be accomplished at levels close to the children.[18] In fact, what goes on behind the classroom door is under the control of the teacher, who may or may not be especially interested in responding to exhortations from those higher up in the organization.[19] Clearly as important as any other factor, information that is accurate and appropriate is required for the change agents.[20] The present study was designed to address an aspect of educational change[21] by examining the impact of one group of assumed potential change instruments: the journals of education.

---

[11] I. C. Candoli, "The Urban School System," Theory Into Practice, XV (October, 1976), p. 245.

[12] Loucks and Pratt, op. cit., p. 213. [13] Ibid.

[14] Reg Hinely and Gerald Ponder, "Theory, Practice, and Classroom Research," Theory Into Practice, XVIII (June, 1979), p. 135.

[15] Harold J. McNally, "Who's Changing What and Why?" Address before the National Association of Elementary School Principals (Anaheim, California May 2, 1974).

[16] Candoli, loc. cit. [17] Loucks and Pratt, loc. cit.

[18] Candoli, loc. cit.

Great numbers of studies analyzing important problems and describing notable practices have appeared in education journals in recent years. The education journal has been heralded as a stimulus to change in that as a class, such publications are seen as a prime source of information[22,23,24] appropriate both to enhance and to enlighten change and to stimulate and reinforce desirable practice.[25] Journals have the capability of achieving a far wider readership among professional educators than do books[26] and are recognized as the most successful carrier of information in the history of print.[27]

---

[19] Terrence E. Deal and Lynn D. Celotti, "How Much Influence Do (and/Can) Educational Administrators Have on Classrooms?" Phi Delta Kappan, LI (March, 1980), p. 472.

[20] Barbara J. Benham, "How a Staff Change Agent Can Help Teachers, Schools," NASSP Bulletin, LX (November, 1976), pp. 92-97.

[21] Florence Hamlish Levinsohn, "In Defense of the Status Quo," (paper presented at the Annual Meeting of the American Educational Research Association, New York City, April 9, 1977), p.9.

[22] Donald R. Gallo, "Journal Reading and Selected Measures of Teaching Effectiveness," Research in the Teaching of English (Spring, 1970), p. 45.

[23] Allen Berger and Charlene Andolina, "How Administrators Keep abreast of Trends and Research in Reading," Journal of Reading, XXI (November, 1977), pp. 121-125.

[24] P. E. Childs, "Chemical Literature for the Teacher," Education in Chemistry, XXXII (May, 1979), p. 86.

Reading in professional journals is seen as one of the prime responsibilities of the professional. Such reading contributes to an educator's professional growth.[28] Both Barnard[29] and Knezevich[30] attested to the need for informed judgment in the professional educator. Childs[31] presented a lengthy list of the professional advantages of reading in the periodical literature. Other professionals in medicine, accounting, business, and engineering identified their journals as significant and the reading of those journals as a professional necessity.[32,33,34,35]

---

[25] Edward G. Summers, "Information Characteristics of The Journal of Reading," Journal of Reading, XXXII (October, 1979), p. 46.

[26] Dennis D. Embry, "Disseminating Research Findings: A Blueprint for Affecting Educational Research and Practice," Educational Technology, XIX (March, 1979), p. 25.

[27] Summers, op. cit., p. 40.

[28] John J. Cogan and Douglas H. Anderson, "Teachers' Professional Reading Habits," Language Arts, LIV (March, 1977), p. 254.

[29] Chester I. Barnard, The Functions of the Executive, (Cambridge: Harvard University, 1938), p. 302.

[30] Stephen J. Knezevich, Administration of Public Education (3d ed.; New York: Harper and Row, 1975), p. 449.

[31] Childs, loc. cit.

As they serve both as teachers and curriculum leaders in high schools, department heads are expected to read professional literature and interpret it to their colleagues.[36] Squire[37] remarked that the quality of a school's department heads affects the quality of the school's program. The department head, usually an experienced teacher,[38] is an instructional leader, often considered formally or informally a deputy of the

---

[32] Stanley Elliott, "Tuition by Post: An Historical Perspective," Teaching at a Distance, XI (May, 1978), p. 12.

[33] Patricia F. Lewis, "Professional Literature: Who Reads It?" Training and Development Journal, VI (September, 1977), p. 9.

[34] Bruce F. Currie, "Continuing Education from Medical Periodicals," Journal of Medical Education, LI (May, 1976), p. 420.

[35] J. H. Harelik, et al., "Pharmacist and Physician Evaluation of Drug Information Sources," American Journal of Hospital Pharmacy, VI (June, 1975), p. 597.

[36] The Work of the Business and Distributive Education Department Chairman (Albany: New York State Education Department, Bureau of Secondary Curriculum Development, 1968), p. 4.

[37] James R. Squire and Roger K. Applebee, High School English Instruction Today (New York: Appleton-Century-Crofts, 1968), pp. 245-246.

[38] James M. Gallagher, "How to Make Better Use of Department Chairmen," (paper presented at the Annual Meeting of the National Association of Secondary School Principals, 61st, New Orleans, Louisiana, January 18, 1977), p. 5.

principal, and one with whom the principal often shares authority. The department head is a teacher on whom the principal must rely to keep the school curriculum current and to help keep the principal informed on department matters.[39] For the present study, the investigator has taken the view that department heads are in an ideal position to appreciate the importance of identifying accurately and reporting the sources of any changes in their classroom practice.

THE PROBLEM

Some investigators have expressed concern that many school people may not know about or read education journals.[40,41,42] Others have registered doubt that public school classroom teachers or their leadership at any level read much of anything besides student work and administrative memoranda. It is evidently an open question as to whether education professionals are moved to effect changes in their classroom practice by stimuli presented in journals.[43,44,45]

---

[39] Paul Houts, Tom Koerner, and Robert J. Krajewski, "View from the Bridge: A Discussion," Theory Into Practice, XVIII (February, 1979), p. 4.

[40] Joseph Ilika, "A Critical Review of the Teacher Readership Characteristics Research and the Implications or Performance-Based Teaching," (paper presented at the Annual Meeting of the International Reading Association, 19th, New Orleans, Louisiana, May 4, 1974), p. 5.

[41] Levinsohn, op. cit., p. 5.

[42] Lewis, op. cit., p. 11.

Membership in education organizations carries well-known and substantial professional rewards, often including subscription to journals. American education journals and education-related journals have continued to multiply so as to number nearly 700.[46] Implications are routinely offered by the editors of the journals to the effect that their products are indeed read and that they influence professional practice.

Statement of the Problem

In fact, few studies have systematically explored the journal-reading behavior of public secondary school professionals, and none is evident in the literature to describe the perceived effects of journal literature on practice in high school classrooms. If a school district, graduate school, professional organization, licensing agency, or journal editorial board were to seek data that describe systematically elements of the journal-reading behavior of public high school leadership, and that describe the effects of such reading on classroom practice

---

[43] Cogan and Anderson, op. cit., p. 254

[44] Knezevich, op. cit., p. 449.

[45] Stanley Mour, "Do Teachers Read?" The Reading Teacher, XXX (January, 1977), p. 400.

[46] "Source Journal Index," Current Index to Journals in Education, XI (October, 1979).

as perceived by those practitioners, then that school district, et al., would not be able to locate such data. The purpose of the present study was to solicit, systematize, interpret, and present a variety of data on the reading of professional education journals and other influential education-related periodicals reported by high school department leaders and on the impact of such reading on classroom practice as perceived by the practitioners themselves.

The Objectives of the Study

The objectives of the study were twofold:

1. to determine the influence of education journals on classroom practice; and
2. to establish a profile of setting and characteristics of department heads whose leadership illustrates the use of journal literature in effecting change in classroom practice.

The Questions Presented by the Study

The study was designed to obtain evidence that might support conclusions about the role of the journals of education in affecting high school classroom practice. Six questions needed to be answered in order to discover such possible evidence:

1. What are the changes in practice that department heads report have been stimulated by journal literature?

2. Are journal-influenced changes in practice experienced equally by the departments selected for study?[47]

3. Which publications do high school department heads cite as having direct, practical value in their classroom practice?

4. Does department head membership in journal-publishing professional organizations relate to reported change in practice?

5. How frequent among department heads is the sharing with colleagues of journal and other information about classroom practice?

6. Is there a complex of professional and personal characteristics that appears to typify the department heads who report journal-influenced changes in their classroom practice?

Subsumed under each of the questions were from one to fifteen specific items included in a survey instrument designed to produce data to answer the questions. Entitled, "High School Department Leadership: Sources of Educational Information and Change in Classroom Practice," the questionnaire will be referred to in the present study as "instrument," "questionnaire," or "survey." Questionnaire items are identified in detail in Chapter 3. A copy of the questionnaire is included as Appendix A to this study.

---

[47] For listing of those departments, please see "Sources of the Data" in this chapter below.

The Hypotheses to Be Tested

Certain of the data obtained in response to the questions posed by the study were appropriate to subject to inferential statistical treatment. Accordingly, four hypotheses were advanced to address in part or in whole the questions above:

H_1: Department heads across all subject matter areas will agree as to their self-estimate of the degree to which they have continued to keep up with innovation and the growth of knowledge in their fields.

H_2: Department heads across all subject matter areas will agree in their self-assessment of the relative quality of their reading ability.

H_3: Department heads across all subject matter areas will agree as to whether or not they have initiated one or more innovations in their own classroom practice.

H_4: Department heads across all subject matter areas who report journal-affected change in classroom practice will agree as to

A. their self-assessed performance in keeping up with innovation and curriculum knowledge;

B. whether or not they have designed new courses or units;

C. whether or not they have initiated changes in their own practice;

D. their self-assessed reading ability;

E. the degree of their use of journals to improve their practice; and

F. the degree to which they share curriculum information with their colleagues.

The Significance of the Study

School leaders typically base their organizational and classroom practice decisions not only on district policy and on their own perceptions of need, but also on prevailing practice and news of change from comparable operations elsewhere. Vehicles for communication of such practice and change include professional colleagues, graduate schools, the staff development programs of professional organizations, and the mass media. Another vehicle is the professional education journal, a medium whose readership has been characterized in part in the literature, but whose perceived direct influence on classroom practice evidently is unknown.

Accurate descriptive information and inferential data were needed concerning the information sources and journal reading of high school department heads and the perceived effects of such reading on their classroom practice. Such data were required in order to identify the predominating information channels and the most prominent avenues for change among high school department heads, and to discover the prevalent uses of education journal literature. Enlightenment in this area of study was seen to be likely to result in improved educational service to pupils. Pertinent data were not available prior to the conduct of the present study , which has resulted in the systematic and comprehensible presentation of those data.

PROCEDURES FOR THE STUDY

This study was designed to be descriptive. However, it employed inferential techniques as well.

The Research Design

Data for this study were gathered by means of a questionnaire. The questionnaire required respondents to supply personal and professional status information, data about journals read and about the perceived relative professional usefulness of journals, and data about changes in their classroom practice inspired by professional journal literature.

Definition of Terms

Following are defined some of the terms used frequently or with special meaning in the study. Other terms occasionally were defined for convenience as footnotes to the text.

Department head: The formally or informally designated or recognized leader of a staff who teach in a particular curriculum area or collection of subjects, i.e., for this study: English, social studies/social science, physical education, mathematics, and science; may also be known as "chairman," "Chair," "division head," "lead teacher," or "executive;" serves in the classroom full-time or part-time.

Influence of journals on practice, direct: Journal contents typically serve the reader as stimuli to take action, alter environment, or change attitude in one's own academic province.

Influence of journals on practice, indirect: Journal contents typically provide the reader with information in a context appropriate for improved understanding of positions and problems including those removed from the reader's own academic province.

Journals: Unless otherwise specified, the terms "journal" and "education journal" encompass research journals, scholarly journals, professional journals, and association journals, as differentiated by Silverman;[48] i.e., periodicals including monthlies, bi-monthlies, quarterlies, and the like; and others which may include publications whose themes and purposes vary but whose broad apparent intentions include the dissemination of information about the theory and practice of education.

Practice: Unless otherwise specified, classroom practice; environments, activities, and attitudes which the classroom teacher employs, encourages, and may seek to modify in order to stimulate student learning.

Profession: Characterized both by mastery of a specific body of knowledge acquired in a more or less tightly prescribed course of study, and by being regulated by some public body that both sanctions and circumscribes certain of its activities, so that the public can be protected.[49]

---

[48] Robert J. Silverman, "Commitments of Editors in Education," Educational Forum, XLIV (January, 1980), p. 231.

Professional: One who because of a chosen relationship with a profession that has assumed decision-making powers bears obligation to gain and maintain "exemplary skill and virtue."[50]

Readership characteristics: In addition to personal and other professional data, the quantity, quality, and variety of journal reading that department heads engage in for professional purposes.

Schools: Unless otherwise specified, comprehensive public high schools, consisting of three, four, or five grades; "comprehensive," namely, schools serving simultaneously the purposes of preparing students for immediate employment and preparing students for additional schooling or training.

Delimitations of the Study

The study focused on secondary education rather than on elementary or post-secondary education for several reasons. Among those reasons were that the high school subject-matter areas best lend themselves to such a study, and that many journals are oriented to the subject-matter specialties of high school personnel and might be expected to be influential in such areas.

---

[49] Walter Rosenblith, "A Note on Engineering and the Other Professions," Daedalus, CIX (Winter, 1980), p. 185.

[50] Walter Doyle, "Education for All: The Triumph of Professionalism," Perspectives on Curriculum Development 1776-1976, O. L. Davis, ed. (Washington, D.C.: Association for Supervision and Curriculum Development, 1976), p. 23.

Because of the possibilities for broader, more systematic examination offered by the public high schools, the study was not concerned with private, independent, or parochial school educators. The study did not focus on individual schools, programs, or staff; or on individual districts, except as district features might anonymously and as members of a class be compared or contrasted in the population for the study. The study was not concerned with continuation high schools, alternative high schools, technical or other special-purpose high schools, or junior high schools, except as such junior high school grade levels, typically grades seven and eight, might have been incorporated into a high school; or except for those schools titled "junior-senior high school." Districts and schools were not identified by name or so described as to be individually identifiable by school or district. Individuals were not identified with districts by title or function or name.

The study was not primarily concerned with perceived effects on classroom practice of publications other than journals as defined above. Books, newsletters, and other types of publications were excluded from concern as inappropriate.

Sources of the Data

The data for the study were obtained via questionnaire from systematically selected department heads in a sample representing California public high schools. Using the California Public School Directory, 1980[51] as the source of information, the investigator stratified the population by size of school. Size of school was selected as an independent variable to be controlled in this study because of doubt as to whether size of school might be related to the incidence of department head reference to education journals.

The sample was drawn using a stratified random sampling procedure. Krejcie's and Margan's "Table for Determining Sample Size"[52] indicates that a minimum of 257 schools be defined as a sample for a population of 770, the number of high schools that comprise the population. Using standard technique and following a table of proportions (Table 3.2 below), the investigator identified 260 schools as the sample for the present study.

The department heads selected for inclusion in the present study were leaders of the five departments identified in State publications[53] as encompassing courses of study in which, under California law, all students are required to participate in order to earn credit toward graduation. Physical education was designated as a unified, single course of study, not as two courses that differentiate the sexes.

---

[51] California Public School Directory, 1980 (Sacramento: State Department of Education, 1980).

[52] Robert V. Krejcie and Daryle W. Margan, "Determining Sample Size for Research Activities," Educational and Psychological Measurement, XXX (1970), pp. 607-610.

Two subsamples offered additional sources of data which were statistically treated and/or tabulated and compared with data from the sample. The "organized sample of non-respondents" consisted of department heads who did not respond to the initial mailing. The second subsample represented departments otherwise excluded from the study, e.g., music, industrial arts, business education, etc. This subsample was identified as the "organized sample of alternate respondents," and was composed of one department head of an otherwise unrepresented department for each of the population strata.

Data-Gathering Processes

Several steps preceded administration of the questionnaire employed to gather the data for the study. Letters were scheduled to be sent explaining the project and requesting the support and/or other involvement of superintendents or superintendent-principals and principals and department heads.

---

[53] California, Education Code, Sec. 51225 (1978).

Packets of questionnaires were scheduled to be mailed in care of the school principals. A reminder was sent systematically to each school. The schedule of events established by the investigator encompassed information-providing and -seeking, data-acquisition, and data-processing activities and spanned seven months.

Subsample data were also acquired by mail. Included with the prime-sample packet were questionnaires for the alternate subsample. Questionnaires for the non-respondents were sent some weeks after the prime sample had been contacted. The members of the non-respondent subsample received a special individual appeal for response. Non-respondent subsample surveying was scheduled for completion within six weeks. Within two weeks after completion of the subsample survey, data processing was scheduled to begin.

The Nature of the Instrument

The instrument was a pilot-tested, mailed questionnaire whose contents are described briefly under "Responses" below, and in detail in Chapter 3 of this study. The questionnaire included twenty closed and twenty open items in several modes. A response was expected for every item.

Bias may have influenced the study in that the preference of the investigator is that professionals read extensively in education journals, share their information throughout their organizations, and encourage use in the classroom of the journal-reported findings and descriptions. This problem was controlled in part by the content validation efforts described below.

The instrument was valid. One department head in each of the five subject areas of the study in high schools of districts not used in the sample and easily accessible to the investigator was randomly selected to respond to the questionnaire in draft form. The judgment of these school department people helped confirm the face validity and content validity of the instrument. Selection of schools to provide the personnel for this trial was based on the investigator's observation that such responses represented a randomly-selected population that could be conferred with at length, in depth, conveniently, and without delay. Five other professional educators with experience in questionnaire construction responded to the questionnaire in draft form. The oral and written suggestions and comments of trial respondents were incorporated into the final form of the instrument.

The instrument was reliable. The department heads and the other professionals who helped confirm the content validity of the questionnaire also assisted in gauging its reliability. They helped determine that the instrument appeared consistently to stimulate a similarity of understanding of the purpose of each question from person to person. These persons helped also to clarify the form of presentation, precision of vocabulary, and clarity of instructions.

Nature of the Requested Responses

The questionnaire presented to department heads was designed to elicit responses which would provide answers to the major questions of the study as detailed above. The answers would aid also in determining the accuracy of the hypotheses proposed.

In various modes, the questionnaire solicited a variety of data from the department heads, including those data which comprised some of the variables that were used for comparison, such as the journals seen as influential in affecting the department heads' practice. Forms of response included Likert-type scales which allowed expression of degrees of response, labeled-cell checking, and fill-in.

Treatment of the Data

Responses were coded, recorded numerically, and key-punched for electronic data processing. Frequencies and percentages were tabulated for a variety of descriptive items. Cross-tabulations and breakdowns were performed.

Total scores and means were calculated for the inferential data. Inferential items were analyzed by means of the one-way analysis of variance statistic.

SUMMARY

The present study was a descriptive and inferential investigation of the perceived influence of education journal literature on the classroom practice of department heads in a stratified random sample of the public high schools of California. The research involved securing status, rating, and opinion data from respondents by means of a series of mailed surveys. The data were statistically treated, tabulated, and analyzed. Conclusions were drawn, a profile was constructed, and recommendations were offered.

Outcomes of the Study

Findings of the present study are expected to offer a variety of implications for the administrators of school programs not only at department level, but at school and district level. For example, this study may offer useful information for administrators responsible for program planning, staff development, and data dissemination. It is expected that teacher trainers, the planners of the activities of the professional associations of educators, and the editors of journals will find the data produced by the study both interesting and useful.

Organization of the Remainder of the Study

Chapter 1 of the study provided the introduction and overview. Chapter 2 presents a review of the literature associated with the dynamics of change, both generally and specifically in schools, functions of school leadership, readership characteristics of school people, and related topics.

Chapter 3 describes in detail the instrument used in the study and the methods by which the data were gathered and analyzed. Chapter 4 presents the data and their analysis. Chapter 5 concludes the study with a summary, discussion, conclusions, and recommendations for further study.

Chapter 2

REVIEW OF THE LITERATURE

This chapter contains a survey of the research literature related to the nature of educational change; of the agents of educational change that appear directly to affect classroom practice, with special attention to high school curriculum leadership; and to the professional educator as professional reader, especially as reader of the journals of education.

An understanding of these areas along with their subtopics appears likely to contribute to an understanding of the extent and nature of the influence of education journals on classroom practice. In designing the present study, the investigator discovered the paucity of research on the theme of the relationship between journals and practice, and determined that it was of greater importance to consider the relatively broad range of topics as are here presented than to survey exhaustively any one of the topics listed above.

The Nature of Educational Change

A reading of Henning and others[1] suggests that among the most profound influences for change in public schools is one that constitutes a mode of change in and of itself and is one over which school persons have almost no direct influence: the mandates of legislatures and of the courts. The body of literature related to the topic is now extensive and appears to be growing rapidly; however, that mode does not appear to be germane to the development of the present study and will not be pursued here. Other topics do appear to be important and germane.

---

[1] Joel F. Henning, Charles White, Michael Sorgen, and Leigh Stelzer, Mandate for Change: The Impact of Law on Educational Innovation, (Chicago: American Bar Association, 1979).

Change processes are ambiguous. Educators are caught between conflicting positions. Educators are confronted with the dilemma of being expected to preserve society while changing it. In the last decade, tension between these opposing forces of societal conservation and revolution/evolution has been increased with corresponding increases in and pressures on education. Merely the planning of change is controversial. School change processes seem also to be slow, complex, and ambiguous.[2,3]

Goodlad remarked regarding the ambiguity of change processes that "we know that no innovation or intervention consistently and unambiguously makes a difference in student

---

[2] William Lowe Boyd, "The Politics of Curriculum Change and Stability," Educational Researcher, VIII (February, 1979), p. 12.

[3] Kenneth D. Benne, Warren G. Bennis, and Robert Chin, "Planned Change in America," The Planning of Change, eds. Warren G. Bennis, et al. (3d ed.; New York: Holt, Rinehart and Winston, 1976), p. 13.

outcomes."[4] Change is often defined as a process, not an event. Research suggests that a minimum of three to five years are necessary to implement an innovation that is significantly different from current practice.[5,6] The unavailability of adequate descriptions of school change processes has been deplored, as have been the frustrations of attempting to find successful change strategies for the variety of school circumstances.[7]

Change has been described as entailing developmental growth in both feelings about new programs and skills in using them.[8] The various stages of change may be described as initiation, development, and implementation. Change may be planned or unplanned. It may be viewed as oriented to the individual or to a group. Various terms are widely accepted to describe strategies for implementation: "power," "influence," and "reason" are but a few. Whatever the paths that are taken to using any given framework, school change processes are notably complex.[9]

---

[4] John I. Goodlad, "Can Our Schools Get Better?", Phi Delta Kappan, LXI (January, 1979), p. 346.

[5] Susan Loucks and Harold Pratt, "A Concerns-Based Approach to Curriculum Change," Educational Leadership, XXXVII (December, 1979), p. 213.

[6] Ibid., p. 214.

[7] Seymour B. Sarason, The Culture of the School and the Problem of Change (Boston: Allyn and Bacon, 1971), p. 2.

[8] Loucks and Pratt, loc. cit.

Change is difficult. Despite the relatively large theory base in education and the many efforts to implement these theories, schooling practices remain remarkably stable and remarkably resistant to change. People-change is apparently more difficult than technology-change. Instructional change in the school setting is necessarily a matter of changing the way people function. This need produces difficulties not equaled in situations where change is predominantly technological rather than human.[10,11]

The great innovations of the sixties --the new math, social studies, and science, for example-- made an impact in the classroom, say the experts, but most of their substance appears to be watered down for reasons which are not quite clear. A National Science Foundation team examined the innovations of the last twenty years in secondary school mathematics, science, and social science and found that, on the average, the innovations had faded from importance throughout the curriculum, materials tended to be selected on the basis of their concreteness and simplicity of vocabulary, textbooks tended to dominate instruction, and "basics" --or the lowest levels in the cognitive hierarchy--tended to hold sway in the classroom.[12]

---

[9] Theodore J. Czajkowski and Jerry L. Patterson, "Curriculum Change and the School," Considered Action for Curriculum Improvement, ed. Arthur W. Foshay (Alexandria: Association for Supervision and Curriculum Development, 1980), p. 171.

[10] Reg Hinely and Gerald Ponder, "Theory, Practice, and Classroom Research," Theory Into Practice, XVIII June, 1979), p. 135.

[11] Ben M. Harris, "Strategies for Instructional Change --Promising Ideas and Perplexing Problems," ERIC Document ED 013 799 (1966), p. 93.

Researchers who participated in the Rand change agent study that addressed the problems of initiating, supporting, and maintaining productive change in schools that have federally-funded programs found evidence to support the conclusion that current efforts to change teacher behavior and "develop staff" in meaningful ways to benefit students have been largely ineffective and a waste of time, effort, and money.[13]

Change is slow. There are indications, however, that the public school does appear slowly to be affirmatively responsive to change efforts. In a study of the major successful or persisting changes in education for the preceding 75 years, researchers categorized and classified change so as to identify long-term change origins.[14] The data suggested that the successful changes all originated from within the education field; two-thirds of the administration and organization changes originated within education; half of the curriculum changes originated within the field. Apparently the public school is more responsive to change than is generally conceded. The initiation of change may come from a number of sources: professionals, social groups, government, or may arise from research, from ideologies, and from professional wisdom. The source is less important to staying power than the support the change receives and the strain it places on school personnel.[15]

---

[12] "Status Report: Pre-College Science, Mathematics, and Social Studies," EPIEgram Materials, VII (April, 1979), pp. 1-3.

[13] Milbrey Wallen McLaughlin and David D. Marsh, "Staff Development and School Change," Staff Development: New Demands, New Realities, New Perspectives, eds. Ann Lieberman and Lynne Miller (New York: Teachers College, 1979), p. 69.

[14] Donald Orlosky and B. Othanel Smith, "Educational Change: Its Origins and Characteristics," Phi Delta Kappan, LIV (March, 1972), p. 414.

School change agents must have up-to-date knowledge of relevant outside resources. Unfortunately, simply knowing is not enough to get a change activated.[16]

Change may be frightening. A variety of phobias and other change inhibitors seem to cause need for euphemisms of the very word "change." Code words for the word are a response to the perception of the word as an anxiety and resistance stimulator. Among such code words are included the terms "self-renewal program," " organizational development," "professional growth," and "staff development activity."[17]

---

[15] Barbara J. Benham, "How a Staff Change Agent Can Help Teachers, Schools," NASSP Bulletin, LX (November, 1976), pp. 92-97.

[16] William J. Gephart, "Practical Applications of Research," Practical Applications of Research, I (March, 1979), p. 1.

[17] Thomas J. Sergiovanni, Handbook for Effective Department Leadership: Concepts and Practices in Today's Secondary Schools (Boston: Allyn and Bacon, 1977), p. 209.

Existing organizational patterns govern how change may proceed. Organizational structure and patterns govern roles and relationships and define the permissible ways of approaching problems.[18] Many schools today have collective bargaining contracts that spell out exactly that relationship which teachers must --or should-- have with supervisors.[19]

Many educators agree that anyone affected by education should be involved in some aspect of curriculum decision-making, a complex component of change. Certainly, school program change for improvement is part of the process of ongoing professional learning.[20,21]

Change is complex. The study of school change processes is a problem of staggering complexity. Sarason identified at least eight items or complexes of information that are necessary merely to describe the phenomenon of school change:

1. specific conditions giving rise to the need for change;
2. individuals and groups associated with those conditions;

---

[18] Sarason, op. cit., p. 12.

[19] Paul Houts, Tom Koerner, and Robert J. Krajewski, "View from the Bridge: A Discussion," Theory Into Practice, XVIII (February, 1979), p. 5.

[20] Francis P. Hunkins, "Building Curriculum: Influences and Mechanisms," Perspectives on Curriculum Development 1776-1976, ed. O. L. Davis, Jr. (Washington: Association for Supervision and Curriculum Development, 1976), p. 115.

[21] Czajkowski and Patterson, op. cit., p. 173.

3. who (individuals and/or groups) formulated and initiated the need for change;

4. the action that was considered;

5. the basis for choosing the course of action;

6. the degree to which problems were anticipated and vehicles developed for their prevention or amelioration;

7. the ways in which the changes were themselves affected by the process of change;

8. the clarity of and transformations in the criteria by which the changers and others judge the effort.[22]

The acceptance of change has been described as a complex of factors. Change acceptance might be visualized as though placed on a scale of points illustrating a progression:

1. Sabotage
2. Slowdown
3. Protest
4. Apathy
5. Acceptance
6. Support
7. Cooperation
8. Commitment[23]

Characteristics for a theory of change are also complex. Some characteristics might include the following:

1. A theory of change must be appropriate for the social setting of the problems it attempts to confront.

2. Opposition within the organization to be affected must be expected and planned for.

---

[22] Sarason, op. cit., p. 31.

[33] W. J. Reddin, Managerial Effectiveness (New York: McGraw-Hill, 1970), p. 166.

3. Conflict between the needs of leadership and the demand for representativeness must be faced.

4. A realistic time frame must be established.[24]

A variety of models or strategies of change have been identified. The five classic models of change have been defined as "power," "human relations," "restructuring," "temporary systems," and "organizational renewal." The Rand change agent study senior authors McLaughlin and Marsh identified clusters of necessary local change factors: institutional motivation, project planning and implementation strategies, institutional leadership, and certain teacher characteristics. In any change, the attitudes expressed by district officers about the proposal served as a signal to teachers of the priority that likely would be given the projects, and also as an index of the commitment that teachers might find it profitable to make in the enterprise.[26]

Four devices for planning and implementing change were identified in the Rand study: "Top-down" planning occurred at the central office and was announced. "Grassroots" planning came from the teacher level with no involvement of district officers. "No planning" was noted as the third device. This non-device involved importing a project with little or no involvement of staff at any level. The fourth device was identified as that which is necessary for both short-term and long-term success: The device might be called the "collaborative mode" in which the various organizational levels have apparently equal participation.[27]

---

[24] Sarason, op. cit., pp. 59-61.

[25] Warren Bennis, The Unconscious Conspiracy: Why Leaders Can't Lead (New York: Amacom, 1976), p. 99.

[26] McLaughlin and Marsh, op. cit., p. 75.

The scope of proposed change affected teacher motivation also. The more complex and demanding the change, the greater the commitment was from teachers. This response may be ascribed to the teachers' sense of professionalism. A primary motivation for teachers to take on extra work and other personal costs of attempting change is not extra pay, but the belief that they will become better teachers and that their students will benefit.[28]

Change strategies can be characterized. Three strategies for curriculum change are often characterized as "reason," "power," and "influence." The reason model argues that the more knowledgeable teachers are, the more they will strive to improve the curriculum. Apparently there are necessary conditions for applying the "reason" strategy:

1. Curriculum stasis is caused by ignorance of alternatives.
2. Goals are clear and accepted.
3. Implementation means are clearly understood and are feasible.

These conditions are rarely to be found occurring at once. More credence may be given to the "power" model when change must occur rapidly and when initial opposition is great, as in the need to implement a legislatively-mandated program. The third and often more successful change strategy is described as the "influence" mode. Implementation will more likely occur if the implementers have been persuaded, manipulated, seduced --if conditions have been made more appealing.[29]

---

[27] Ibid.

[28] Ibid.

Three groups of change strategies may be characterized otherwise as:

> 1. empirical-rational (assumes that man's rational self-interest is his prime motivation);
>
> 2. normative-re-educative (a refinement of empirical-rational, it assumes that change occurs only when the change in pattern or action includes the affective as well as the intellectual);
>
> 3. power-based (assumes that change will occur only after the application of some sort of power).[30]

Change can be described structurally. Educational change can be reduced to three varieties: structural change, superficial substitution, and personally-internalized. Structural change involves change in arrangement, form, or organization --without necessarily changing learning quality. Superficial substitution requires that one change materials or methods of instruction without necessarily understanding what one is doing because, for example, one is ordered to use new materials. Internalized change is insightful, personally integrated change borne of personal commitment. Internalized change appears to be the only change that can survive long in the school setting.[31]

---

[29] Jerry L. Patterson and Theodore J. Czajkowski, "Implementation: Neglected Phase in Curriculum Change," Educational Leadership, XXXVII (December, 1979), p. 204.

[30] Robert Chin and Kenneth D. Benne, "General Strategies for Effecting Changes in Human Systems," The Planning of Change, eds. Warren G. Bennis, et al. (3d ed.; New York: Holt, Rinehart and Winston, 1976), pp. 23-24.

Some change models appear defective. The "rational" model of change has been scored as "counterproductive." Goodlad, a proponent of the humanistic approach to change, identified the so-called "rational" model (calling for process identification, delineation, and measurement of goals) as essentially unworkable in that the model appears rather often to make negative, deficit assumptions about schooling and about the people who operate them.[32] Advocates of the "reason" strategy of change argued that the knowledgeable teacher will try to reduce the difference between what is and what ought to be. Others agreed that this strategy is rarely successful[33] and expressed concern for the future of any change which relies mainly on its rational elements to support it.[34,35] A tendency of rational effort apparently is to overlook unintended consequences of systems, such as avoidance behavior engaged in by professionals --such behavior stimulated by the very activity it may have been selected to obviate.

---

[31] Harold J. McNally, "Who's Changing What, and Why?" Address before the National Association of Elementary School Principals (Anaheim, California, April 27, 1974).

[32] Goodlad, op. cit. p. 345.

[33] Patterson and Czajkowski, loc. cit.

Some change models appear to be especially popular. The "organizational development" model of change appears to have considerable support among professional educators. However, it may be more effective to view the participating individuals rather than the institution as the "primary unit of intervention" in the process of effecting change. Possibly an example of error is the organizational development point of view that focuses on "communication" or "organizational norms," rather than on the roles of individuals in implementing change.[36]

The "concerns-based" change models also have considerable support in the literature. The concerns-based adoption model is described as a systematic curriculum-development process in which effective change occurs.[37]

---

[34] Arthur Blumberg, "Supervision: What Is and What Might Be," Theory Into Practice, XVI (October, 1976), p. 285.

[35] Fenwick W. English, "Management Practice as a Key to Curriculum Leadership," Educational Leadership, XXXVI (March, 1979), p. 408.

[36] Loucks and Pratt, loc. cit.

[37] G. E. Hall, R. C. Wallace, and W. A. Dossett, A Developmental Conceptualization of the Adoption Process within Educational Institutions (Austin: Research and Development Center for Teacher Education, University of Texas, 1973).

The model pays special attention to the concerns of the teachers during the process of implementation, characterizing that concern as typically falling into stages in a hierarchy. The hierarchy of concerns consists of six stages, beginning with "awareness" as the lowest, least-involved level, and proceeding through "informational," "personal," "management," "consequence," "collaboration," and "re-focusing." The "concerns-based" approach to change emphasizes the role of the individual in the process of implementing change.[38]

Stimulants to Change in Education

The activities of the principal in implementing change are evidently critical to the success of an effort, although the principal may not be personally involved in the change activity. The principal and the principal's deputies are most clearly effective in implementing change by relieving teachers of management-type concerns (scheduling equipment, apportioning time, providing moral support), thus freeing teacher time to address "consequence concerns;" that is, address the effects of the implemented change.[39]

District-level support is needed. District and school-level support are immensely important for effective change. Because teachers do not know what they need to know until a specific need arises, training programs usually cannot be planned far in advance. Support persons, like principals, coordinators, and department heads who offer high-quality and informative assistance were found to be valuable in helping teachers to implement change. A good school climate combined with district support and school-level leadership perceived by teachers as strongly supportive contributes to very positive conditions for change implementation and continuation.[40]

---

[38] Loucks and Pratt, loc. cit. [39] Ibid., p. 215.

Important differences in pupil learning can occur between schools with nearly identical faculties, staff, and socio-economic class of student enrollment.[41] Differences found have been attributable primarily to the leadership behavior of the principal and the principal's staff. Leadership, particularly in recent years, has been in the function of the principal, not in the status or authority of the position.[42] The educational leader, as all other leaders, must assume leadership by exhibiting qualities needed by all leaders: knowledge, intuition, consideration, energy, goal-orientation, process-wisdom, organizing ability, and skill in moving and motivating.

Innovation can be erroneous. Typically, changes in schools result from pressures outside the school. The decision to make the change often is made by people not working in the school; and change proposals have their origins in the community, in boards of education, and among central office personnel. Unfortunately, too often the wrong people have taken responsibility and leadership and have "innovated" for the wrong reasons and in the wrong way. School building staff must understand thoroughly and support change if it is to be successful. Administrators, especially principals and their delegates, can not function successfully so much as makers of change as facilitators, procedural task-masters.[43]

---

[40] McLaughlin and Marsh, op. cit., p. 83.

[41] William C. Miller, "Can a Principal's Improved Behavior Result in High Pupil Achievement?" Educational Leadership, XXXIII (February, 1976), pp. 336-338.

[42] Gilbert R. Weldy, Principals: What They Do and Who They Are (Reston: National Association of Secondary Principals, 1979), pp. 35-36.

Individual educators may choose to innovate depending on the example, incentive, or reward for innovation offered by the institutions with which they are associated.[44] Principals often prioritize their activities according to the priorities they see their superiors establish for themselves.[45] Teachers who perceive a principal as supporting innovation do in fact innovate more often. Such support is often evidenced by higher frequencies of reporting the sharing of educational literature.[46]

---

[43] McNally, op. cit.

[44] Boyd, op. cit., p. 14.

[45] Allan Vann, "Can Principals Lead in Curriculum Development?" Educational Leadership, XXXVI (March, 1979), p. 405.

[46] Dennis D. Embry, "Disseminating Research Findings: A Blueprint for Affecting Educational Research and Practice," Educational Technology, XIX (March, 1979), p. 27.

Change is an individual matter. Change is a highly personal experience and can be accomplished only by individuals, not institutions.[47] How potential change may relate to the personal ambitions, concerns, perceptions, prejudices of those expected to implement the change tends to affect whether the change will be successfully implemented. In another view, decision makers may exercise more or less influence depending on the teaching staff's personal interest or lack of it. The "zone of indifference" was occasionally cited as referring to the relative interest one has in the process of making a decision. The greater the staff indifference to a decision's likely having effects on individuals, the more likely a task-oriented department head may implement a change unilaterally.[48] The Rand change agent study findings suggested that changes in educational practice require teachers who are both trained and motivated; and that change is a function far less of technology than of people and organizations --a recurring theme throughout the literature.[49]

The essential characteristics of the effective change agent present one who:

---

[47] Loucks and Pratt, op. cit., p. 214.

[48] Robert Tannenbaum and Warren Schmidt, "How to Choose a Leadership Pattern," Harvard Business Review, XXXV (Spring, 1957).

[49] McLaughlin and Marsh, loc. cit.

1. enjoys professional esteem;
2. is a stimulator and an inspiring person;
3. is open to suggestions;
4. is prudent and perceptive;
5. is cooperative;
6. has leadership qualities and is influential.[50]

Teachers after all are the best agents for classroom change. In terms of knowledge about the practice of teaching, they often represent the best clinical expertise available.[51]

Universities may stimulate change. Universities may be helpful in school change efforts. The Rand study data suggested that universities will have to implement very significant changes themselves if they are to be effective partners in school district change efforts.[52] Elsewhere throughout the literature, universities appear to be taken for granted as natural and expected sources of change.

The Inhibitors of Change

The general lack of major change in classroom practice referred to throughout the literature may be the result of lack of determination to change. The evidence of some remarkable changes in educational practice throughout the country may be contrasted with the lack of change perceived as obvious by others. This apparent paradox may be explained in part by noting that the innovative policies enacted and advertised may in fact have been only partially implemented at best.[53]

---

[50] Andre Morin, "An Innovator's Odyssey: How to Become a Thoughtful Change Agent," Educational Technology, X (November, 1975), pp. 43-45.

[51] Czajkowski and Patterson, op. cit., p. 172.

[52] McLaughlin and Marsh, op. cit., p. 94.

Negative influences are many. A variety of often negative influences operate on curriculum change agents today: publishers, developers of materials, legislators, judges, professional associations, and pressure groups too numerous to mention.[54] The sentiments and traditions of communities, especially rural communities, may be extraordinarily conservative --or at least resistant to change-- when it comes to subjects that touch core natural values such as social studies, literature, biology, and the like.[55] In less value-laden subjects such as mathematics, educators appear to have more freedom of action. However, even the teaching methods for abstract skills may be highly controversial.

Declining enrollments in schools throughout the country have required school districts to rely less on "new blood" that now only trickles in, and more on veteran teachers. The veterans must learn how to upgrade and update their skills if beneficial change is to occur.[56] Declining enrollment has been viewed also as an opportunity for school organizations to become less crisis-oriented and more pro-action oriented.[57] Such an outcome seems possible.

---

[53] Boyd, loc. cit. [54] Hunkins, op. cit., p. 72.

[55] Boyd, op. cit., p. 15.

[56] McLaughlin and Marsh, loc. cit.

Selection of strategies of intervention and change needs to vary depending on whether one is dealing with schools high or low in population exchange. But the data are few and mixed as to whether pupil mobility is a stimulus or an inhibitor of change in classroom practice.[58]

Non-implementation may be the chief deterrent to effective change. Several explanations for the non-implementation of any innovative program include misinterpretation, selective non-compliance with direction, evasion of direction; ignorance, simple and willful; lack of incentive, and absence of the imaginative powers necessary to translate theory into practice.[59] For there appear to be two kinds of curriculum in the schools, the one in the curriculum guide and the one in the classroom when the teacher shuts the door. They often differ. Care taken in constructing the curriculum guides makes no difference if the guides are ignored by the teacher. Teachers make a variety of choices which affect the kinds and the quality of experience which they provide.[61]

---

[57] Houts, et al., op. cit., p. 4.

[58] Sarason, op. cit., p. 103.

[59] Boyd, op. cit., p. 16.

[60] Florence Stratemeyer, Hamden L. Forkner, Margaret G. McKim, and A. Harry Passow, Developing a Curriculum for Modern Living (2d ed., New York: Columbia University, 1957), p. 664.

Teachers influence themselves. Teachers reported in Goodlad's study of schooling that the main influences on what they teach are what the teachers perceive as the interests and needs of the students and the interests and experiences of the teachers themselves --especially the latter.[62] It is probable that a "loose coupling" exists among school-levels, not an effective hierarchy in which superintendents direct principals who direct department heads, etc. Such leaders have more influence informally (e.g., by ceremony) than by rank and direction. What goes on behind the classroom door is controlled directly by the teacher who may or may not wish to be influenced by the superintendent or principal.[63]

In a statement reflecting the conventional wisdom of the education profession, Hoffman asserted that the teacher's most valuable resource has usually been other teachers.[64] It may be that the teacher's most frequently used resource is the teacher himself. For teachers appear often to act alone in making curriculum changes. Frequently, defects in organization require the teacher to re-design his thinking all by himself. His colleagues may have their own ideas about practice, which may range all the way from passing interest in implementation of goals and objectives to a complete disregard of them.[65]

---

[61] English, loc. cit.

[62] Frances M. Klein, Kenneth A. Tye, and Joyce E. Wright, "A Study of Schooling: Curriculum," Phi Delta Kappan, LXI (December, 1979), pp. 244-248.

[63] Terrence E. Deal and Lynn D. Celotti, "How Much Influence Do (and/Can) Educational Administrators Have on Classrooms?" Phi Delta Kappan, LI (March, 1980), p. 472.

[64] Charlotte K. Hoffman, "Teacher Training Inside Out," American Education, IV (August/September, 1979), p. 6.

Teachers often work alone. Isolation is the best description of the teacher's work environment.[66] Teachers toil in remarkable isolation from adult contact for the most part. The result renders new learning and change unlikely when one's rewards depend almost exclusively on one's relationship with children, when these rewards are frequently indirect and non-verbal, and when frustrations are often more frequent than rewards.[67]

The neophyte teacher experiences an ordeal in moving almost without apprenticeship from pre-service to service, to working with little peer support, in a condition that is rather close to professional isolation.[68] Nor do teachers usually discuss, share, or consider with their colleagues the relative merits of their classroom practice.

---

[65] Philo T. Pritzkan, Dynamics of Curriculum Improvement (Englewood Cliffs: Prentice-Hall, 1959), p. 101.

[66] Ann Lieberman and Lynne Miller, "The Social Realities of Teaching," Teachers College Record, LXXX (September, 1978), p. 57.

[67] Sarason, op. cit., p. 107.

[68] Lieberman and Miller, loc cit.

High school teachers, especially, seem to prefer being private about their teaching practice. They do not appear typically to wish to share their experiences or their perception of their roles with anyone inside the school building. Novice teachers are sometimes cautioned not to expect in the new school job the stimulating intellectual life of the university.[69] Teachers are described as craving adult, professional conversation with their peers, but often getting instead mostly tales about teenage capers and complaints about the job.[70]

Departmentalization is not always best. Organizing teachers into subject-matter departments may not provide a satisfactory answer to the change-inhibiting effects attributed to isolation. Departmentalization in high schools may actually preclude most effective change in program and governance and diminish the possibility of solving problems that affect all departments in the school. Departmentalization tends to orient teachers to their subject matter rather than to the personal needs of their students.[71] Professional educators also may experience a change-inhibiting conflict between their school or department values and their professional values. For example, whereas the professional teacher is expected to emphasize change, innovation, and research, the teacher as member of a bureaucracy is expected to emphasize rules, regulations, and procedures.[72]

---

[69] Sally Frederick and Barry Kincaid, "What Beginning English Teachers Need to Know about Keeping up Professionally: Boiler Room Blues, or Beyond the Price of Day-Old Bread," English Education, X (May, 1979), p. 261.

[70] Nathalie J. Gehrke, "Renewing Teachers' Enthusiasm: A Professional Dilemma," Theory Into Practice, XVIII (June, 1979), p. 190.

[71] Goodlad, op. cit., p. 347.

The classroom itself may be an inhibitor. The argument has been advanced occasionally that the classroom is the worst place to instruct most teenagers. It is charged that the classroom setting absorbs teacher energy in such huge measure that it destroys motivation for increased productivity. Classrooms also are said to strangle professional growth, kill innovations, and prevent change. As one critic observed,

> Every new, exciting program introduced during the last twenty years has been mutated beyond recognition. As (the teacher) tries to keep his head above water, nothing seems so remote or useless as 'professional growth experiences.'[73]

Communication may be poor. Another apparent inhibitor of change is that subject matter changes rapidly; the change processes established in schools are often ancient.[74] The curriculum has been characterized as being ordered in a stately process, as though commanded by God.[75] Investigators have noted limited or lagging transmission and use of research knowledge with regard to educational practice. Too often few innovations are adopted or even known by other teachers in the same school or school system, despite the fact that teaching colleagues have received intensive training in those innovations.

---

[72] Sergiovanni, op. cit.p. 75.

[73] Ralph Kane, "The Mindless Box: The Case against the American Classroom," Phi Delta Kappan, LX (March, 1979), p. 503.

[74] Ben M. Harris and Leonard A. Valverde, "Supervisors and Educational Change," Theory Into Practice, XV (October, 1976), p. 272.

Because of inadequately-developed information dissemination networks, teachers find it difficult to keep up with information that can help them improve instruction. There appears to be no complete, easily accessible source of information enabling classroom people in all parts of the country to stay in tune with basic research and development.[76]

A series of studies illustrated the inability of many teachers to identify essential features of an innovation supposedly being implemented, most especially when such features are not highly explicit.[77] Communication of education practice remains incomplete unless the communication is highly concrete and in fact specifies behaviors which classroom teachers can perform and/or note.

---

[75] Embry, op. cit., p. 26.

[76] Helen P. Bain and J. Ronald Groseclose, "The Dissemination Dilemma and a Plan for Uniting Disseminators and Practitioners," Phi Delta Kappan, LXI (October, 1979), p. 101.

[77] Czajkowski and Patterson, op. cit., p. 171.

Personal limitations are probably a factor. Ignorance and naivete have been identified as inhibitors of change. The uncritical acceptance of research results by the teacher can lead to grossly unsound decisions and unjustified changes in educational procedures.[78] Other human limitations slow the change process. People can use only a limited amount of information at any one time. To simplify the process of selecting a strategy for completing a task, people therefore construct a "problem space" that limits necessary cognitive activity for themselves.[79]

One of the dangers in new technology for the schools may be the ignorance in which school districts approach scientific potential. Such ignorance appears to inhibit change by driving practitioners into dead-end projects. School districts apparently need to place a high priority on acquiring and providing timely and accurate information to remedy ignorance problems.[80,81] Various aspects of the process of change itself often appear to distort the nature of the outcome from what was intended.[82] This notion is reflected again and again in the literature in a variety of contexts.

---

[78] Walter R. Borg and Meredith D. Gall, Educational Research: An Introduction (2d ed., New York: David McKay, 1976), p. 95.

[79] Arthur Newell and Herbert A. Simon, Human Problem Solving (Englewood Cliffs: Prentice-Hall, 1972), p. 84.

[80] William Van Til, "Educational Technology and Professional Practice," Curriculum: Quest for Relevance, ed. William Van Til (New York: Houghton-Mifflin, 1971), p. 304.

[81] H. Warren Button, "Creating More Useable Pasts: History in the Study of Education," Educational Researcher, VIII (May, 1979), p. 8.

In a variant on the "overload" theme, a decision-making model was described that identified factors expected to affect teachers' decisions about instruction: information or cues about students, beliefs and attitudes about education, the nature of the instructional task, and the availability of alternate strategies and materials. Teachers integrate all these data into a few estimates about a student's learning. The process results in remarkable simplification because of the organism's need to protect itself against "information overload." The simplification thus intensifies the importance of what the teacher has effectively "stored."[83] One then must hope that teachers "store" a great deal in pre-service experiences.

In a passage referring to persons in public office but poignantly apropos of other educators, Kissinger cited a phenomenon that may present yet another change inhibitor among educators as well:

> ...the convictions that (leaders) have formed before reaching high office are the

---

[82] Sarason, op. cit., p. 70.

[83] Hilda Borko, Richard Cone, Nancy Attwood Russo, and Richard J. Shavelson, "Teachers' Decision Making," Research on Teaching: Concepts, Findings, and Implications, eds. Penelope L. Peterson and H. J. Walberg (Berkeley: McCutchan, 1979), pp. 136-140.

> intellectual capital they will consume as long as they continue in office. There is little time for (leaders) to reflect. They are locked in an endless battle in which the urgent constantly gains on the important.[84]

Educators may not wish to change. Then, too, school people are not necessarily natural change agents. Many of those who comprise the school culture do not seek change or react enthusiastically to it.[85] Educators may exercise their skills in a "zone of tolerance,"[86] identified as that area in which local educators may exercise their professional leadership. That zone is defined informally by the community and conforms with the values and expectations of the community. As school administrators tend to see harmony and avoidance of conflict as high-level goals, and as school persons tend to view themselves as politically vulnerable, educators tend not to step out of their community's "zone of tolerance" into change and possible controversy.

Risk-taking may be seen as hazardous. Janis and Mann[87] hypothesized about information preferences of decision makers in varying degrees of conflict. When no risks to the decision-maker are evident, his dominant attitude toward both supportive and non-supportive information will be indifference. When the decision-maker (read "change agent") is aware that serious losses could result from whatever alternative is selected, the individual tends to become closed-minded and biased (engages in "defensive-avoidance" behavior) in his information preferences, and change is thus stopped at once.

---

[85] Sarason, op. cit., p. 9. [86] Boyd, op. cit., p. 15.

[87] Irving L. Janis and Leon Mann, Decision Making: A Psychological Analysis of Conflict, Choice, and Commitment (New York: Free Press, 1977), pp. 205-207.

Rewarding seniority rather than merit as they appear to some to do, the public schools do not provide incentive for risk-taking, experimentation, responsiveness to the consumer, and other aspects of change. It may be considered instructive that many public schools perform as well as they do.[88] The socio-economic status of a community is likely to inhibit instructional mode as well as content in politically and culturally sensitive courses. For example, political themes emphasized in civics courses are likely to reflect the consensus of political leadership in the community. Instruction that follows, for example, the neglecting of the role of conflict in the political process may be characterized as "non-instruction."

A powerful constraint on change in classroom practice may come via "non-decision-making," usually at policy levels, but not necessarily only there. Bachrach and Baratz[89] argued that the mechanisms for covert suppression of "unsafe" or "undesirable" issues must be recognized and addressed before such issues can be identified as issues or alternatives. Examples of such issues are segregation as a topic in the 1950's and homosexuality in the 1960's. Such topics may not even be recognized on the local level until national debate or mass media or legislation highlight them and render them relatively "safe."

---

[88] Boyd, op. cit., p. 17.

[89] Paul Bachrach and M. S. Baratz, "Two Faces of Power," American Political Science Review, LVI (Spring, 1962), pp. 947-951.

The conflict-theory approach appears to be helpful in examining the factors that encourage or inhibit persons expected to expose themselves to valuable but potentially risky communications:

> Which journal articles and books do humanist scholars and scientists decide to read and why? Ordinarily these questions are discussed entirely in terms of intellectual trends in the scholar's field of study, such as the scientific interest attached to a new discovery or a new theory. But there may be other explanations of why one piece of experimental evidence has been neglected and another not, or why a certain theoretical treatment is widely read while another remains practically unknown. The selective popularity of scholarly works has often been interpreted in terms of inertia in clinging to a dominant theory or paradigm, but there may be another factor as well --not the least of which may be such unscholarly considerations as entertainment, gossip value, or loyalty to an in-group which serious scholars seldom talk about.[90]

Although this argument may seem rather rarefied in the context of the public secondary school's previously characterized intellectual life, the mechanism may not be far afield.

---

[90] Janis and Mann, op. cit., p. 217.

Labor contracts can inhibit change. Labor-management agreements --or lack of them-- may effectively inhibit change. The larger the organization, the more specific are contract limitations. Schools of fewer than 1500 students tend to be less formalized and rigid than larger schools.[91] One might expect less variety in change reported from schools of larger size. One suggested proposal for obviating organizational resistance was to allow innovations to run parallel with existing projects so as to ease the "pain of change."[92]

Prejudices operate as inhibitors. A plethora of hidden agenda may prevent implementation of change. Overlearned sets of assumptions and conceptions that one no longer questions or thinks about comprise a significant obstacle to educational change. For example, educators are likely to have a multiplicity of opinions and prejudices and function on hidden agenda or covert principles that are a form of second nature that comes into play on decision-making occasions.[93]

Censorship precludes change. A final major constraint on planned change was cited as "non-publication;"[94] that is, the overt and prior censorship by publishers of material that one or another population (read "customer") might find offensive. This phenomenon is most evident in the non-publication of textbooks and, as a great many teachers and systems throw themselves on the mercy of publishers, their curriculum choices generally are most strongly influenced not by local decision-makers after all, but by merchants far away. Thus, journal literature of the education profession appears to become of pre-eminent importance in bringing enlightenment to practitioners. However, there may be some question as to the extent to which educators now read in their own literature.

---

[91] Houts, et al., op. cit., p. 7.

[92] Manfred Bayer and Gerhard E. Ortner, "Professional Development of Educational Administration: Fundamentals and Application," Educational Administration, XVI (Winter, 1978-79), p. 91.

[93] Sarason, loc. cit. [94] Boyd, op. cit., p. 16.

The Education Journal as Change Source and Agent

The first professional journal is reputed to have been Philosophical Transactions, published in 1665 by the Royal Society of London. Since that time the professional journal has become universally recognized as the most successful carrier of information in the history of print.[95,96]

The number of journals in circulation is extraordinarily high. In 1950, journals numbered 100,000 world-wide. By 1985, the number of published journals

---

[95] Edward G. Summers, "Information Characteristics of The Journal of Reading (1959-1977)," Journal of Reading, XXIII (October, 1979), p. 40.

[96] Florence Hamlish Levinsohn, "In Defense of the Status Quo," Paper presented at the Annual Meeting of the American Educational Research Association (New York City, April 7, 1977), p. 8.

throughout the world will likely exceed 300,000.[97] American journals in education and education-related subjects now number nearly 700.

It is accepted generally that professional literature informs professional interaction. Reading appears to be supported in research as a prime means to achieve that end. To achieve familiarity with a large body of knowledge, one discovers that reading has no peer.[98,99]

Teachers may reject textbooks. Whether or not it is now true that teachers rely heavily on textbooks, the weight of evidence suggests that textbooks will be used in schools less in future and the teacher's own resources called upon more and more. In a national opinion study of K-12 supervisors in language arts, mathematics, and modern foreign languages, one trend was discerned in all six areas of study: the decline of the use of the comprehensive textbook and the parallel increase in use of many different kinds of instructional materials.[100]

---

[97] Summers, op. cit., p. 40.

[98] Chester I. Barnard, The Functions of the Executive (Cambridge: Harvard, 1938), pp. 108-109.

[99] Kenneth McIntire, "Training Programs for Principals," Theory Into Practice, XVIII (February, 1979), p. 29.

[100] "Trends in Education," EPIEgram Materials, VI (February, 1979), p. 3.

It would appear that teachers are tapping sources other than textbooks for direction and information. Evidently, the professional journal may be one of those sources. It appears to be important to discover how influential such journals are in actual professional practice.

Periodical material is recognized to be of great professional value in updating one's basic technical knowledge, providing personal enrichment in historical and philosophical aspects of a specialty, acquainting one with knowledge of recent teaching techniques, curriculum development, assessment techniques, and presenting lesson ideas and supplementary reading recommendations.[101,102,103]

The journals may have great influence in the transmission of educational knowledge to other practitioners, for books are not viewed as supreme influences on practice.[104] Barzun offered a variation on

---

[101] P. E. Childs, "Chemical Literature for the Teacher," Education in Chemistry, XXXII (May, 1979), p. 86.

[102] Charles E. Eicher and Robert W. Wood, "Reading Habits of Elementary School Teachers and Principals," Education, XII (Summer, 1977), pp. 385-391.

[103] Allen Berger and Charlene Andolina, "How Administrators Keep Abreast of Trends and Research in Reading," Journal of Reading, XXI (November, 1977), pp. 121-125.

[104] Jerome Cramer, "Why They Bore You: The Story Behind the Books You Didn't Read Last Year," American School Board Journal, CLXVI (April, 1979), p. 44.

this theme when he noted that of the 36,000 books published in this country yearly, few enrich the soul and that few are worth reading for purposes other than the gaining of relatively useless information. The readers are alleged generally not to know the difference anyway.[105,106] The professional associations publish journals which are reputed to be more practically helpful to professionals than are books.[107]

Teachers evidently prefer practical reading. Responses of a hundred teachers and principals in a South Dakota random sample of elementary school educators suggested that elementary principals and elementary teachers were more alike than different in their attention to professional reading. Journals with a how-to-do-it approach were by far preferred to other publications presenting abstract or theoretical concepts. Elementary educators are not reported to read widely in journals representing academic areas of study.[108]

---

[105] Christopher M. Clark and Robert J. Yinger, Teachers' Thinking," Research on Teaching: Concepts, Findings, and Implications, eds. Penelope L. Peterson and Herbert J. Walbert (Berkeley: McCutchan, 1979), pp. 231-263.

[106] Jacques Barzun, "The Future of Reading Books," Journal of Communication, XXVIII (Autumn, 1978), p. 12.

[107] Embry, op. cit. p. 26.

[108] Eicher and Wood, loc. cit.

Research findings should be published in journals rather than in books, because books on research typically attract a more restricted academic readership.[109,110] Because of the relative speed with which they are printed, journals can be more topically relevant than can textbooks.

An educator can find patterns and direction for professional decision by referring to a variety of journals. The information in a journal article has been described as a record of the process of intellectual interaction in exploring, writing, and editing an article. One article in one journal may be idiosyncratic, but an educator may find important patterns and direction in reading and analyzing several or many articles on a subject in a variety of professional journals.[111,112]

Journals are key information sources. Silverman put it dramatically when he said, "What we know in education is only what is created and allowed to pass into print."[113]

---

[109] Childs, loc. cit. [110] Gehrke, op. cit. p. 191.

[111] Summers, loc. cit.

[112] Levinsohn, op. cit., p. 9.

[113] Robert J. Silverman, "Commitments of Editors in Education," Educational Forum, XLIV (January, 1980), p. 241.

The "cutting edge" or element of most current interest indeed tends to appear in journal articles, whereas books are more likely to present established knowledge.[114] The professional journal constitutes an important element in the information network of any discipline.[115,116]

Regular use of journals enables teachers to supplement textbooks and keep classroom practice and knowledge up to date. The teacher who buys and reads his own journals will be better informed than his colleagues.[117,118] Teachers who score high on standardized tests of teaching quality typically subscribed to or read major journals.[119] Teachers who subscribe to journals are more likely to read them thoroughly.[120,121]

Members of the American Educational Research Association (of whom 76 percent sampled were university-affiliated) were asked to rank their choice of the "top ten" education and psychology journals. Choice was to be based on the journals in which readers would most like to be published or would expect to find material important personally. No such "top ten" journals were discovered. Instead, "top ten" lists appeared for interest areas such as those areas that constitute special interest groups of the AERA, e.g., "measurement and research methodology," "social content of education," etc. The inference from this study of journal prestige-ranking and problem-solving journal usage was that cross-fertilization of ideas between education and psychology is limited.[122]

---

[114] Summers, op. cit., p. 46 [115] Ibid.

[116] Donald R. Gallo, "Journal Reading and Selected Measures of Teaching Effectiveness," Research in the Teaching of English (Spring, 1970), p. 45.

[117] Childs, loc. cit. [118] Ibid., p. 88.

[119] Lola June May, "Change and Changelessness," Arithmetic Teacher, XXVIII (May, 1980), p. 37.

[120] Gallo, op. cit.

[121] Childs, op. cit., p. 87.

Journal articles vary in perceived worth. Not all investigators hail the education journal and its contents as infallible herald. Offering a viewpoint that appears to continue among scholars today, one observed that only "ten percent of the articles that appear in education journals are worth reviewing...."[123] Others[124,125,126] commented that a large majority of research-based journal articles contain serious flaws and probably never should have been published. Probably, fewer people will read fewer journals in future because of the magnitude of the task of separating the acceptable from the trash. Even so --and contrary to mass media reports in the 1960's--scholarly publication is likely to remain in the form of the professional journal for some time.[127]

---

[122] Terrence S. Luce and Dale M. Johnson, "Rating of Educational and Psychological Journals, Educational Researcher, VII (November, 1978), p. 10.

[123] William B. Michael, "Teacher Personnel: A Brief Evaluation of the Research Reviewed," Review of Educational Research, XXXIII (1963), p. 443.

[124] Cramer, loc. cit.

[125] Edwin Wandt, "Evaluating Educational Research," ed. Edwin Wandt, A Cross-Section of Educational Research (New York: McKay, 1965), p. 41.

[126] James P. Shaver, "The Productivity of Educational Research and the Applied-Basic Research Distinction," Educational Researcher, VIII (January, 1979), p. 3.

The Nature of the Reading of Educators in a National Context

Asimov announced that Americans as a genus historically and presently scorn intellectual pursuits, do not read much at all, and prefer to be ignorant.[128] Piel observed that the intellectual in western civilization has a heritage of treason and that Americans from earliest times are renowned for the enthusiasm with which they despise intellectuals and intellectual pursuits.[129] With professional reading regarded by some as an intellectual pursuit, the literature on the nature of educator readership presents a blurred vista.

---

[127] Levinsohn, op. cit., p. 3.

[128] Isaac Asimov, "A Cult of Ignorance," Newsweek, January 21, 1980, p. 19.

[129] Gerard Piel, The Acceleration of History (New York: Alfred A. Knopf, 1973), p. 250.

High school teachers are reputed to be anti-intellectual. They rarely discuss ideas, issues, problems, and research relevant to the work of the school. Communication between high school faculty and university faculty is said to be incidental. Few collaborative efforts in curriculum development are initiated by teachers.[130] On the other hand, the formal research experiences of some investigators has convinced them that the information explosion has created great reading demands on Americans --who generally say that they are readers.[131,132,133]

Research on the reading habits of American teachers revealed that teachers read more than the general public on the average. However, research illustrated both that 75 percent of the general public reads not one book a year; and that ten to 15 percent of teachers never read books.[134]

Education demands improved literacy. While general

---

[130] Earl W. Harmer, "Veteran Teachers and Curriculum Development," Phi Delta Kappan, LVIII (June, 1977), p. 751.

[131] "Top Executives Who Can't Read," Stockton (California) Record, April 30, 1979.

[132] Kathryn LeGrand-Brodsky, "Hope for Reading in America: Practically Everyone Reads," Reading Teacher XXXII (May, 1979), pp. 947-949.

[133] John T. Guthrie, "Why People (Say They) Read," Reading Teacher, XXXII (March, 1979), p. 752.

[134] Joseph Ilika, "A Critical Review of the Teacher Readership Characteristics Research and the Implications for Performance Based Teaching," Paper presented at the Annual Meeting of the International Reading Association (19th, New Orleans, May 3, 1974), p. 1.

reading and writing ability in the population has improved dramatically in the last 50 years, the demand for sophisticated or specialized literacy has been increasing apparently with greater rapidity than the improvement. Nowhere more than in education have there been greater demands for improved literacy. Large numbers of Americans --capable readers, including educators evidently-- are choosing not to read. Americans describe themselves in some studies as favoring magazines over books.[135] However, those surveys themselves disclosed that only 20 percent read magazines.[136] Among junior high school students, school-year reading averages about 66 minutes daily for all subjects, but 80 percent of that reading time is for required assignments. The American pattern of reading mainly for the job or for the employer seems to be starting early with reading for the teacher --rather than for any intrinsic merit or for personal improvement or for the joy of reading. Contrary to the belief that Americans in all segments of the population read little more on weekends than on weekdays, most adult reading in this country is done on the job.[137,138] Such reading averages one hour and 46 minutes daily during the week.

---

[135] Larry Mikulecky, "A Changing View of Literacy," Reporting on Reading, V (April, 1979), pp. 4-5.

[136] A. Sharon, "What Do Adults Read?" Reading Research Quarterly, IX (2, 1973-74), pp. 148-169.

[137] Ibid.

[138] Lana J. McWilliams, "Riding and Reading," Journal of Reading, XXII (January, 1979), p. 337.

We may overestimate generally the reading sophistication of all parts of our population. For example, Americans must be able to read a variety of roadway messages to alert them to survival information. Significant numbers of otherwise competent drivers appear not to understand these messages.[139] One of the more typical responses to reports of Americans not reading is that busy Americans simply do not have time for reading.[140]

The Reading Practices of Other Nationals

In countries like Canada, Great Britain, Australia, and Germany, the percentage of citizen readers is from two to three times greater than the percentage of United States citizens reading books.[141] The teachers in those and other countries, however, do not seem to read any more avidly than their American counterparts.

The professional reading habits of 674 public school teachers in the three Maritime Provinces of Canada were surveyed by questionnaire and discovered to read little in their many professional periodicals. Teachers and administrators said they simply were not interested in maintaining a program of professional reading. They said further that they had no time for reading and, besides, they found little of direct value and applicability in their professional publications.[142] Nor are Canadian teachers as a professional group described as avid subscribers to professional publications. Four times as many teachers in one study indicated that they read any periodicals as indicated that they subscribed to periodicals. The most widely read publications were those provided without direct charge by school administration and professional teachers' associations.[143]

---

[139] Wanda Danksza Cook, "Adult Literacy Education in the United States," Research on Reading, V (April, 1979), p. 2.

[140] Mikulecky, loc. cit.

[141] P. H. Mann and J. L. Burgoyne, Books and Reading (London: Andre Deutsch, 1969), p. 11.

The British rely heavily on correspondence schools (and thus reading ability) for professional updating of civil servants and accountants as well as teachers. Reference to the professional journals is a significant part of that mode of teaching.[144] Fewer than 50 percent of studied secondary school science teachers credited their professional journals with any influence either on their course decisions or on information used in their courses. Colleagues and staff meetings were repeatedly cited as being the most influential sources of information for teachers.[145]

---

[142] Andrew S. Hughes and Kimberly Johnston-Doyle, "What Do Teachers Read? Professional Reading and Professional Development," Education Canada, XVIII (Fall, 1978), p. 42.

[143] Ibid.

[144] Stanley Elliott, "Tuition by Post: An Historical Perspective," Teaching at a Distance, XI (May, 1978), p. 7.

The Educator as Professional

One often hears the word "professional" used in a diversity of ways associated with education, including the phrase "professional journal of education." Citing several sources, Kuhlman ascribed the following characteristics to the professional: belief in public service, subscription to a professional discipline, possession of an intellectual reputation, relative autonomy, certification as competent.[146] Doyle defined profession as "an occupation which has assumed a decision-making posture with respect to a significant social function.[147] Such definition appears to be consistent with the posture of teaching.

Teaching is not described as a "pure" profession without some equivocation in the literature. "Unlike pilots, architects, or surgeons," asserted Ginott, "teachers are not vigorously trained in the skills of their calling."[148] Teaching is apparently not considered to be a profession in the true sense of the word, though many professionals work in schools as teachers.[149,150,151] Perhaps the key issue for purposes of the present study is whether or not teachers now regard themselves as "professional" and, if so, accept the implied attendant responsibilities.

---

[145] M. Spencer, "Some Agents of Science Curriculum Change," Education in Science, LXXXII (April, 1979), p. 22.

[146] Edward Kuhlman, "Graduate School Programs as Reinforcers of Professional Norms," Clearing House, LII (May, 1979), p. 436.

[147] Walter Doyle, "Education for All: The Principles of Professionalism," Perspectives on Curriculum Development 1776-1976, ed. O.L. Davis (Washington: Association for Supervision and Curriculum Development, 1976 Yearbook),p.23.

[148] Haim Ginott, Teacher and Child (New York: Macmillan, 1972), p. 120.

Chicago teachers who were cited as professional leaders by peers and principals shared certain characteristics, one of the chief among them being exceptional knowledge of curriculum and instructional skills, a condition one must infer did not generate spontaneously. Such professional leaders also were described as having the capacity to bring about at least moderate change in the school. Older and with more teaching experience, such leaders had been longer than their colleagues at their current schools.[152] Staff re-education is considered vital to the special needs of urban school districts. Simply to remain part of dynamic teaching, teachers must do no less than keep up with

---

[149] Sergiovanni, op. cit., p. 203.

[150] Neil Postman and Charles Weingartner, The School Book (New York: Delacorte, 1973), p. 40

[151] Robert J. Havighurst and Bernice L. Neugarten, Society and Education (2d ed., Bosont: Allyn and Bacon, 1962), p. 492.

[152] Geraldine D. Brownlee, "Characteristics of Teacher Leaders," Educational Horizons, LVII (Spring, 1979), pp. 119-122.

current, effective classroom instructional methods.[153,154] In a society that professes to be democratic, every neglected potential ability is a flaw. Good teaching requires competent advice, self-criticism, guided practice, and self-renewal.[155]

Professionalism and the Responsibility to Read

Knezevich analyzed studies of education and printed communications, finding that the higher one's level of education, the greater the reliance on what is in print. Presentations that are oral and visual are likely to be most convincing to those of lower educational level. Knezevich proposed that the "beginning of learning for a teacher is the teacher's earning of the bachelor's degree."[156] It is evidently a social-societal responsibility of teachers to read and become informed so as to be able to understand the needs and problems of disadvantaged youth and others.[157] But it is not only educators of the disadvantaged who need the massive staff

---

[153] I. C. Candoli, "The Urban School System," Theory Into Practice, XV (October, 1976), p. 245.

[154] Stephen J. Knezevich, Administration of Public Education (ed ed. New York: Harper and Row, 1975), p. 449.

[155] Jacques Barzun, Science: The Glorious Entertainment (Toronto: University of Toronto, 1964), pp. 152-153.

[156] Knezevich, op. cit., p. 69.

[157] Carl L. Marburger, "The Role of Teachers and Community Workers in Depressed Areas," ERIC Document ED 002 530, October, 1964.

retraining now believed necessary for productive educational change in a multicultural world.[158,159]

Educators need to become experts. Education probably began to demand ever more specialized expertise beginning with the early 1970's.[160] For example, the traditional education of physical educators consisted of training in technical physical skills. Required now of those who intend to work in predominantly Black communities are "truly professional...capable Black scholars and practitioners (who) can pave the way for political, social, and economic reform."[161]

The novice teacher must keep up professionally, an activity which is accepted widely as the personal responsibility of the educator.[162] Keeping up is not only for teachers. Instructional leaders must analyze their commitment to the job and include among the questions they

---

[158] John W. Gardner, Excellence (New York: Harper and Row, 1962), p. 28.

[159] Harris and Valverde, loc. cit.

[160] Philip G. Bashook, "A Genealogy of Today's Professions Education: Where Do You Belong?" Professions Education Researcher, I (December, 1979), p. 2.

[161] Hal A. Lawson, "Physical Education and Sport in the Black Community: The Hidden Perspective," Journal of Negro Education, XLVIII (Spring, 1979), p. 195.

[162] Frederick and Kincaid, loc. cit.

ask themselves, "How many curriculum journals do I read?"[163]

Perhaps teachers no longer can be expected to read on their own time as part of their professional responsibility. In the future, teacher unions are likely to expect released time to be provided during the day for teachers to be able to read as part of their professional development. The explosion of knowledge in curriculum, research in learning and child growth and development, and development in instructional methods and materials have demanded that the classroom teacher be not only an able practitioner, but a competent scholar as well.[164]

Journals offer professional opportunity. Teachers like other professionals cannot be trained entirely pre-service, but must learn on the job.[165,166] Among professionals, only teachers are turned out with the expectation that they will get the bulk of their preparation at a later time, mostly on their own. Training for teachers occurs on the job in the natural setting. In that setting one of the most effective and often overlooked avenues to continued professional growth is a regular and conscientious program of professional reading.[167,168,169,170] Those who persist in not reading, articulated one commentator, cannot inspire the young, cannot generate enthusiasm in young learners, and should be counseled out of teaching.[171] It is probably true that if practitioners are not reading, then they are less likely than their reader colleagues to know what is required to produce rational change.[172,173]

---

[163] Patricia B. Novotney, "The Principal as an Instructional Leader," Educational Leadership, XXXVI (March, 1979), pp. 405-416.

[164] John J. Cogan and Douglas H. Anderson, "Teachers' Professional Reading Habits," Language Arts, LIV (March, 1977), p. 254.

[165] Ron Brandt, "A Conversation with John Goodlad," Educational Leadership, XXXVII (December, 1979), p. 225.

[166] Virginia Koehler, "The Future of Teacher Preparation and Research on Teaching," Theory Into Practice, XVIII (June, 1979), pp. 200-201.

Teachers themselves say that what they teach is determined in large part by their own interests and experience.[174] To the extent that this is true, teachers appear to have a powerful obligation to keep themselves

---

[167] Cogan and Anderson, loc. cit.

[168] Stanley Mour, "Do Teachers Read?" Reading Teacher, XXX (January, 1977), p. 397.

[169] Joseph Reynolds, "Teachers, You Don't Need to Burn Out," Christian Science Monitor, June 13, 1979.

[170] Frederick and Kincaid, op. cit., p. 265.

[171] Robert V. Duffey, "Elementary School Teachers' Reading," paper presented at the Annual Meeting of the College Reading Association (Bethesda, Maryland, October, 1974), p. 9.

[172] Levinsohn, op. cit. p. 7. [173] Childs, loc. cit.

[174] John J. Goodlad, The Dynamics of Change in Schools (New York: McGraw-Hill, 1975), p. 75.

informed.[175,176] Secondary teachers may have greater inclination in this direction than elementary teachers. Secondary teachers are more likely than their elementary counterparts to identify with professors and the interests of professors, and thus to read the journals. This identification process may be the result of the professional-reference-group contact inherent in the secondary school subject specialty required in teacher certification.[177]

As buying and reading one's own specialty journals is a mark of the enthusiastic and alert teacher,[178] so is the sharing of what one reads. While social isolation is a possible cause for people's reading less, human contact reinforces reading, and readers generally display a desire or intent to share what they've read with others, either privately or professionally.[179] Growing professionally

---

[175] Chris Pipho, "The NAEP Conference on Minimum Competency Testing," Phi Delta Kappan, LXI (October, 1979), p. 123.

[176] John A. Williamson, "Biographical Factors and Teacher Effectiveness," Journal of Experimental Education, XXXVII (Spring, 1969), pp. 85-88.

[177] Kuhlman, op. cit. p. 437.

[178] Childs, op. cit. p. 88.

[179] Heinz Steinberg, "Social Integration as the Source of Motivation to Read among Adults," Journal of Reading, XXII (May, 1979), p. 746.

outside the classroom was cited among a multiplicity of strategies for counteracting isolation and boredom with the job, strategies which included changing the classroom routine, taking brief holidays, changing cities, changing job roles, and leaving the field.[180]

Other Professionals and Their Reading

In concluding his education-oriented study, Mour observed,

> Perhaps the importance of reading has been overemphasized. Perhaps teachers are neither better nor worse with respect to their reading habits than other occupational groups.[181]

It appears to be appropriate now to examine the reading characteristics of some other professionals.

Factors have been identified in school nursing practice that often reflect need for well-prepared professional intervention. The nurse who is confronted every day with requests from parents, school staff, and students for services relating to health issues must have an adequate knowledge base and must continually add new skills and information.[182]

The medical profession is not entirely immune from allegations of illiteracy of sorts among its ranks. The English Medical Council's outcry on reading the mind-boggling final examinations of their medical students led Atkinson to compose his famous parody in Punch, "How I Done My Research."[183] Law school deans have occasionally discovered that few of their students, however carefully selected, possess the skills of reading to the extent needed for law.[184]

---

[180] Gehrke, loc. cit. [181] Mour, op. cit., p. 400.

[182] Mildred C. Williamson, "Staff Development for the School Nurse Practitioner," Journal of School Health, IX (October, 1978), p. 471.

The question of whether any particular periodicals must be part of the business professional's repertory produced responses suggesting a core of ten basic periodicals. Respondents in a survey of business trainers felt that the amount of literature available to be read is excessive; that perhaps business professionals do not have time to read the periodicals they have. Ninety-nine percent of the respondents felt that the reading of professional literature is an effective way to keep abreast of developments in the business world. It may be deduced that professional literature may have considerable impact on business professionals. Business training managers appear to spend as much time reading work-related materials at home as they do at work.[185]

---

[183] Jacques Barzun, The House of Intellect (New York: Harper and Brothers, 1959), p. 117.

[184] Ibid.

[185] Patricia F. Lewis, "Professional Literature: Who Reads It?" Training and Development Journal, VI (September, 1977), p. 8.

Physicians were found to rate their professional journals consistently "good" and rate other sources of information as "poor" in comparison. Pharmacists as part of the same study rated only textbooks as "good."[186] Physicians evidently spend an average of two hours weekly scanning and reading their professional publications.[187] Studies indicated that three-fourths of medical periodicals are scanned and slightly less than half read to some extent. Physicians cite their journals as "the most valuable and available information source for their ongoing education."[188]

Professional engineers apparently require extensive and up-to-date information and challenges in order to maintain a high order of competence. Engineers are said to read their journals.[189]

The Quality of Preparation for Reading among Educators

Barzun proposed that there can be no good reader who does not possess a true feeling for the written word.

---

[186] J. H. Harelik, P. M. Johnston, N. P. Rivers, and M. R. Ryan, "Pharmacist and Physician Evaluation of Drug Information Sources," American Journal of Hospital Pharmacy, XXXII (June, 1975), pp. 594-597.

[187] Bruce F. Currie, "Continuing Education from Medical Periodicals," Journal of Medical Education, LI (May, 1976), p. 420.

[188] Ibid.

[189] Bean E. Beachler, David C. Joswick, and R. J. Shubert," Are Your Professionals Staying Professional?" Personnel Journal, XII (September, 1978), p. 478.

"There are few good readers," he said; "It is too difficult."[190] More secondary teachers than elementary teachers have been found to perceive themsleves as being "good readers." Testing supports the self-perception, leaving one to infer than teachers appear to know when they are able to do something well and will comply when they are asked to report that self-knowledge.[191]

However, neither the professional nor leisure reading of graduate students in this country has been found to be extensive. The respondents to several studies were enrolled at the time in graduate survey courses in reading instruction. One might surmise, therefore, that these teachers had a more-than-ordinary interest in reading. Results typically demonstrated that the majority had read one to two leisure volumes during the previous year; but a significant minority had read no book at all, leisure or professional, in the year preceding the studies. Most of the subjects read little. In the answers to a companion question on the reading of professional journals, less than half of the respondents claimed to be readers of a professional journal on a regular basis. As the subjects were working teachers and graduate students, perhaps they saw their required reading as sufficient for their professional development without additional reading.[192]

---

[190] Barzun, "Future," op. cit., p. 16.

[191] Patricia L. Anders, and Judy Nichols Mitchell, "Comparing Elementary and Secondary Teachers: Reading Attitudes, Awareness, and Abilities," (unpublished manuscript, University of Arizona, Tucson, 1978), p. 6.

Teachers as a group may be counted among those who themselves have inadequate reading skill. Indeed, reading test scores for teachers generally do not hover at or near the top of any graph reported. Nor do tests of other cognitive skills show that educators are high scorers or dedicated readers.[193,194,195,196]

This picture of deficiency among educators may be changing. Whereas in 1963-64, 81 percent of the applicants to graduate schools of education were below average in the verbal section of the Graduate Record Examination, 1972-73 figures show the percentage in the sixties.[197,198,199]

---

[192] Mour, loc. cit.

[193] R. Scott Baldwin and J. E. Readence, "Critical Reading and Perceived Authority," Journal of Reading, XXII (April, 1979), p. 619.

[194] Ilika, op. cit., p. 8. [195] McIntire, loc. cit.

[196] James A. Dinnan and Lawrence E. Hafner, "Reading Interests and Abilities of College Students," Reading Improvement, IX (Winter, 1970), pp. 63-65.

[197] W. Phillips Weaver, "Teachers' Reading of the News," paper presented at the Maryland Reading Institute, (Silver Springs, October, 1968).

[198] Levinsohn, op. cit., p. 5.

[199] Charles M. Frye, "Who Runs the Schools?" Newsweek, XCIV, September 3, 1979, p. 13.

Widely held opinion has often characterized older teachers (as contrasted with those fresh from training) as inflexible, resistant to education innovation and new knowledge, poor relaters to children, less happy and psychologically less healthy, less able to work hard. A recent study showed profound disagreement with the conventional wisdom in nearly all categories cited above.[200] It may be difficult for a professional to confess to not growing intellectually and professionally. But, in fact, most recent teacher graduates reportedly do not read professional journals as frequently as do their older colleagues.[201]

Reading Habits of Public School Educators

There are but few studies of the reading habits of public school teachers. Several of the most-quoted studies featured administrators or included professors and undergraduates. For example, Smith's study of professors and instructors in certain Tennessee colleges and university English methods courses showed that more than half of those professionals gained instructional and other ideas from journals. But more frequently reported were studies in which educators --teachers, administrators, professors-- typically were not affiliated with professional subject-matter or other journal-producing organizations, did not read extensively (in research areas), and did not attend conferences.[202,203,204,205,206]

---

[200] Earl W. Harmer, "Veteran Teachers: Old Myths and New Realities," Phi Delta Kappan, LX (March, 1979), pp. 536-538.

[201] Cogan and Anderson, op. cit. p. 258.

Teachers do appear to prefer journals which present practical ideas which can be implemented in the classroom. The "practical" journals are not those in which most college and university faculty publish. Unfortunately for the profession, those who often have most to say about current issues and trends --the university scholars-- do not generally publish in these "practical" journals. The gap between theory and practice is thus widened.[207] Apparently, teachers read mostly Today's Education or literature of the American Federation of Teachers and some specific "how-to" journals. Their administrative colleagues read journals from administrative

---

[202] Mour, op. cit., p. 398

[203] Annie Lou Smith, "A Study of English Methods Courses in Selected Tennessee Colleges and Universities," (unpublished Doctoral dissertation, University of Tennessee, 1969), p. 160.

[204] Charlene Andolina and Allen Berger, "The Printed Word That Comes Periodically to Schools --Educational Journals and Magazines," Journal of Reading, XXXII (October, 1979), pp. 36-38.

[205] Duffey, op. cit., p. 8.

[206] Cogan and Anderson, loc. cit.

[207] Ibid., p. 257.

and specialist associations; a few administrators read scholarly journals.[208] No group reads much in the scholarly journals where ideas are detailed so as to enable actual facilitation of change in education.[209]

Excuses for Not Reading

Excuses for not reading appear to be limited to a relative few that are widely employed. High school principals frequently cited the press of other duties and a lack of time for not "keeping up" professionally.[210] They who perform as deputies for principals might be expected to share in the pressures and possibly in the excuses of the principal.

Many current periodicals reportedly have little of direct, practical classroom value. Teachers complain about a shortage of materials to read and a lack of interest in those that are available.[211] Teachers may not reserve any time for reading, professional or leisure.[212]

A number of other reasons were given by educators to excuse their relatively low level of readership:

---

[208] Martha M. McCarthy, George D. Kuh, and Joan M. Beckman, "Characteristics and Attitudes of Doctoral Students in Educational Administration," Phi Delta Kappan, LXI (November, 1979), p. 201.

[209] Levinsohn, loc. cit.

[210] Houts et al., loc. cit.

[211] Cogan and Anderson, op. cit. p. 254.

[212] Duffey, op. cit., p. 10.

> 1. the unpopular style in which education literature is written;
> 2. the energy drain of classroom teaching or/and school administration;
> 3. the need to spend time grading papers;
> 4. the demands of housework and children at home;
> 5. the need for non-eyestraining activities with which to recuperate.[213]

Hipple and Giblin[214] suggested that the nature of the high school English teacher's job holds the key to why such teachers did not seem to know about and read in the very journals that are written to help them do a better job: the 300-word theme from each of 160-180 students represents the same amount of reading as is in the average-size professional book --or 15 to 20 journal articles. The English teacher might also be expected to read in the content area, in literature, in rhetoric, in linguistics. Teachers in other subject areas who report little contact with journals might also be expected to report reading books in the content areas. They might be expected to stay current in their fields and become aware of effective new strategies and materials by attending conferences, clinics, and workshops. They might be expected to belong to professional subject-matter interest organizations, becoming familiar with the great issues confronting education and making professional capital of the convention speakers and audio-tape resources such organizations feature. In short, if teachers are discovered not to read the journals, they might reasonably be expected to report that they employ other means to stay in touch with progress.

---

[213] Ilika, op. cit., p. 4.

[214] Theodore W. Hipple and Thomas R. Giblin, "Professional Reading of Teachers Questionnaire," Research in the Teaching of English, V (Fall, 1971), p. 160.

SUMMARY

Change in the classroom practice of teachers is characteristically short-term, inspired occasionally by school-level formal leadership, but probably more often by colleagues in other classrooms. Such change is influenced by both school and district-level leadership. For teachers to identify classroom change as successful, they must participate unforced in its formulation as well as in its execution. Without such teacher involvement, change efforts are often seen as dead-end events. In both large- and small-scale efforts, successful change typically proceeds at a slow pace from goal-oriented individuals who learn adaptively and in a non-linear mode. Such change agents do innovate systematically; that is, they make use of the progression of needs assessment to goal formulation to inhibitor identification to strategy planning, etc., whether or not the system is consciously recognized as such. The system must include communicators who reach among and between organization members with supportive news of the events. In larger-scale changes the community must also understand the goals and support the change efforts.

On the smaller scale, the single-classroom teacher-innovator is subject to all of the inhibitors that damage major change processes. Furthermore, the teacher working alone must innovate with little encouragement. Working in apparently near-isolation, the teacher is in urgent need of accurate information on which to base effective change in practice.

A major potential source of information and stimulus for classroom change agents might be the journal. Such a condition in fact has not been documented, although journals have impressive credentials in the literature as chroniclers and information carriers. Educators are often identified in the literature as beneficiaries of the journals, of which those described as practical are much preferred to those that are academic or theoretical. However, journals and their contents vary immensely in quality.

The journal might truly be an important information source and stimulus for classroom change. This might be so even though Americans are reported to read little.

Citizens of other countries tend to be more enthusiastic in their reading than do Americans. However, teachers in other western lands appear to be not much more enthusiastic in their reading than American teachers.

As a defined professional, the teacher might be expected to read if not widely and enthusiastically, then at least selectively to stay current. It is conceivable that the teacher might be excused from such expectation in that teaching is not yet truly accepted as a profession, and, for the most part, teachers use skills and knowledge possessed by or available to anyone. As professionals, or quasi-professionals, however, teachers do appear to have a responsibility to continue to learn and grow, and to do so by reading. They cannot get such finished learning in their pre-service training. Certainly reading in the literature is a sign of the superior professional, and non-reading is a sign of one who ought to consider another line of work.

Reading in the journals in order to stay abreast of one's peers or --perhaps more accurately-- to know what is new, interesting, effective in one's field is one of the accepted characteristics of the model educator. Journal readers are said to share their discoveries and to prefer practical reading. Certain practitioners in other professions find value in reading their journals.

American teachers do not appear typically to come to local schools prepared to cite, quote from, discuss, subscribe to, or in fact pick up and read journals. The reading test scores of pre-service teachers for years have fallen at or near the bottom of almost any collection of such scores. Administrators are reported to score lower yet. But there appear to be signs of a change for the better, including some optimistic studies of the reading habits of educators in general. Among educators who report not reading, lack of time was the reason most frequently cited. No study was discovered in the present search that relates the use of journals to classroom activity.

Chapter 3

METHODOLOGY

The methodology employed in the present study was designed to discover the influence of education journal literature on the classroom practice of California high school department heads. The methodology was designed also to obtain a variety of related data in order to answer the questions posed in Chapter 1.

Data were collected by mail and were processed electronically. Data were collected from a prime sample and two subsamples by means of a questionnaire entitled, "High School Department Leadership: Sources of Educational Information and Change in Classroom Practice." The questionnaire and its processing are described in detail later in this chapter. For brevity, the instrument will be referred to as "questionnaire" throughout this chapter.

The Population and Sample

In the 1979-80 school year, 770 high schools served California communities. This universe was represented in schools of diverse sizes of population, as illustrated in Table 3.1 below.

Size of the sample was established as 260 schools by means of reference to statistical tables as described in Chapter 1. The sample was identified using the stratified random sampling procedure. Each school in the population was assigned a sequential number, after which

Table 3.1

California High Schools in 1979-80 As
Distributed by Size of Student Population

Stratum	Number of Students	Number of Schools	Percent
1	1- 99	16	2.1
2	100- 299	47	6.1
3	300- 499	44	5.7
4	500- 699	40	5.2
5	700- 899	29	3.8
6	900-1199	53	6.9
7	1200-1399	69	8.9
8	1400-1599	69	8.9
9	1600-1799	89	11.7
10	1800-1999	81	10.6
11	2000-2199	69	8.9
12	2200-2399	59	7.6
13	2400-2599	49	6.3
14	2600-2799	17	2.2
15	2800-2999	11	1.4
16	3000+	28	3.7
	TOTALS	770	100.0

Source: California Public School Directory, 1980 (Sacramento: California State Department of Education, 1980).

reference to a table of random numbers produced corresponding-numbered schools for the sample.

The 770 high schools which comprised the population were separated by size into sixteen strata, using increments of 200, from schools of from 99 students or fewer to schools of 3,000 students or more. It was expected that this procedure would result in the sample's displaying normal distribution of a variety of features, including geographical and sociological characteristics.

Drawn without replication, the random numbers identified in sequence a number of schools for each stratum corresponding by percentage with schools in each stratum of the population. Additional schools were identified systematically for a reserve list to compensate for other losses to the sample. The sample-size design is illustrated in Table 3.2 below.

Within all but the first three strata of the sample, five department instructional leadership positions in each school were targeted to receive the questionnaire. In California schools of 499 or fewer pupils, it appears that the teachers of science and mathematics almost universally participate in more than one subject-matter area. Therefore, four instead of five questionnaires were reserved for each of the schools in the first three strata. Of the 36 schools involved in this limited coverage of 13.9 percent of the sample, questionnaires were addressed to 18 mathematics leaders and 18 science leaders, each of whom had opportunity to indicate on the questionnaire a combination leadership assignment. The total number of questionnaires mailed to potential respondents in the prime sample was 1,264.

Table 3.2

Number of Randomly-Selected California High Schools Identified by Stratum for the Sample

Stratum	Number of Schools	Percent
1	5	2.1
2	16	6.1
3	15	5.7
4	14	5.2
5	10	3.8
6	18	6.9
7	23	8.9
8	23	8.9
9	30	11.6
10	28	10.6
11	23	8.9
12	20	7.6
13	16	6.3
14	6	2.2
15	4	1.4
16	9	3.7
TOTALS	260	100.0

The Subsamples

The investigator believed it would be interesting to compare the sample responses with those of selected subsamples. It was believed that comparison of such data would enhance confidence in generalizing from the sample data. Therefore, two subsamples were identified by employing random sampling techniques.

The first subsample was the "organized sample of non-respondents." Non-respondents for this purpose were identified by selecting every ninth school in the prime sample, both partially respondent and totally non-respondent after the first five weeks had elapsed from estimated time of receipt of the questionnaires in the schools. Twenty-six were identified randomly and proportionally by stratum. Twenty-six was the number corresponding with ten percent of the prime sample, the percentage initially determined to serve as this subsample. A reserve list was prepared by the same means so as to enable the gaining of 26 members for this subsample. From each school identified, one non-respondent department head position was selected in rotation, randomly: English, mathematics, physical education, science, social science. The non-respondents were identified by name by referring to the principal's response card or, if from a school for which the principal did not return the card, by the investigator's telephoning the school for the information.

The second subsample was the "organized sample of alternate respondents." One alternate department position was identified randomly and in rotation from among those subject-matter areas not required by the State for high school graduation: music, industrial arts, business, etc. Principals had been asked to identify these potential respondents among the other department heads whom the principals listed on a returned postcard. One "alternate respondent" was identified for each of the sample's strata. Sixteen respondents were so identified for the subsample.

The Instrument and Its Development

The instrument used to gather data from the members of the sample and subsamples was the questionnaire. The questionnaire was developed after considering the questions posed by the study, reviewing the research literature in several areas, and consulting with a variety of school curriculum leaders in the pilot-testing phase of development. In using the questionnaire, the investigator sought to discern the sources of information on which department heads base improvement of their classroom instruction and to assess the influence of journals in that complex process of improvement.

Questionnaire items corresponded with the questions of the study. The questionnaire was designed to answer the questions and to determine the appropriateness of the hypotheses presented in Chapter. Each questionnaire item was related to one or more of the questions of the study.

Question 1 of the study pointed to specific changes influenced by journal literature. FREQUENCIES and BREAKDOWN subprograms were used for descriptive statistics in answering the question. Items 65-75 of the questionnaire provided the data.

Question 2 of the study referred to the frequency relative among departments of journal-influenced change. FREQUENCIES and BREAKDOWN were employed for the descriptive statistics. Questionnaire response items 65-75 pertained.

Question 3 sought to identify publications that stimulate change in practice. FREQUENCIES was the descriptive subprogram selected. Response items 56-59, 61-63, and 66,69,72, and 75 were pertinent.

Question 4 of the study referred to department head membership in journal-publishing professional organizations and the relationship of that membership to reported change in classroom practice. FREQUENCIES and BREAKDOWN were the descriptive statistics subprograms used. Questionnaire response items 40-47 pertained.

Question 5 of the study sought to discover the frequency with which department heads share with colleagues the information they may gain from journals and other sources. FREQUENCIES and CROSSTABS were the subprograms used to analyze the data. Items 88-107 comprised the information source in the questionnaire.

Question 6 and Hypothesis 4 of the study referred to a possible complex of professional and personal characteristics that may typify the department head whose classroom practice is influenced by journals. Hypotheses 1, 2, and 3 were complementary with Question 6, referring respectively to department heads' keeping up with innovation, assessing their own reading ability, and initiating classroom change --however such change might have been influenced. FREQUENCIES, CROSSTABS, and BREAKDOWN were employed as the descriptive statistics subprograms for the question. ONEWAY was selected as the subprogram for the inferential statistics used with the hypotheses. Each analysis of variance which revealed significant statistical differences was followed by an a posteriori contrast test. LSD (Least-Significant-Difference) at alpha=.05 was the test selected. Questionnaire response items 1-55, 80-86, and 88-107 were designed to relate to Question 6 and Hypotheses 1-4 of the study.

The questionnaire was designed to be mailed. Although questionnaires were mailed to the schools in a packet, department heads were expected to respond individually. The questionnaire consisted of a cover-page and seven pages of contents printed on both sides of two 8-1/2 by 11-inch sheets. The outside sheet was of heavier stock than the inner sheet in order to minimize the hazards of mailing. The cover-page of the outer sheet included the address of the investigator and was marked with "time value" and "first class mail" hand-stamped in red so as to encourage prompt handling by both recipient and postal authorities. The questionnaire was presented with return-postage affixed.

The reverse cover-sheet contained the school's investigator-assigned identification number, along with a printed notation that the code number was necessary for cross-tabulation with group data. The reverse also noted that responses would be respected individually as confidences. The reverse contained a cell to enable the respondent to request a copy of the findings of the investigation.

The questionnaire was printed in black ink on white paper. The sheets were folded and stapled in the fold so as to keep the sheets in page-order. The respondent was requested by a statement in small print on the cover to fasten the completed questionnaire with tape before mailing. One thousand five hundred questionnaires were prepared.

The questionnaire opened vertically and offered the respondent instructions, cells to check, and blanks to fill. Two items, 80 and 87 presented opportunity for sentence-completion responses. The questionnaire included an explanatory, personalized note to the department head attached to the questionnaire by a small, colored clip.

As the questionnaire was designed to be reasonably easy to answer, and was postage-paid, the respondents needed only to fasten the completed questionnaire and mail it. The questionnaire was coded to indicate whether each was prime-sample or subsample and whether the principal had provided the department head's name enabling a personalized questionnaire.

The questionnaire was pilot-tested. Five department heads randomly identified and serving in schools not part of the study participated in pilot-testing drafts of the instrument. The pilot-testing involving these individuals was accomplished by mail in order to achieve an accurate representation of field conditions. The written comments of these department heads led the investigator to alter the contents, phrasing, and order of several items and to delete others.

Five other professional secondary or higher educators with experience in questionnaire construction responded orally or in writing to the questionnaire in draft form. Their commentary was influential in altering the form of the questionnaire so as to render the final form relatively easy to answer.

The Data-Gathering Procedures

A variety of transactions by mail established the procedures for securing the data for the study and preceded administration of the questionnaire. As a professional courtesy, the investigator mailed a brief letter to the superintendents of each of the school districts represented in the study (Appendix B). The letter was under the letterhead of the investigator's school of education. In the letter the investigator described the study, solicited the superintendent's support, and requested return of a postage-paid, self-addressed postcard documenting that support (Appendix C). Superintendents might also use the card to refuse participation. If a superintendent did refuse, the investigator selected an alternate district and school from a reserve list prepared for that contingency. The 24 superintendents who served also as principals received a special form of both letter (Appendix D) and card (Appendix E). The investigator's faculty advisor composed a supporting letter which was enclosed also (Appendix F).

The investigator next mailed an introductory letter to the principal of each school identified for the sample and not refused by its superintendent (Appendix G). The letter described the study, emphasized its confidentiality, and requested that the principal write on an accompanying self-addressed, post-paid card the names of the school's leaders for each area of instruction (Appendix H). The investigator explained in the letter to the principal that he hoped to personalize questionnaires to be sent to the school's department heads or to the principal's choice of the person in the equivalent position. The principal was informed that questionnaires were to be sent to the school for department heads "in the fall."

At the beginning of the new school year, the investigator mailed the promised questionnaires in packets addressed care of the principal to the schools identified for the sample. Also included in the packet was a personal reminder to the principal (Appendix I).

The present study had been endorsed by the Association of California School Administrators (Appendix J). A statement to this effect was printed prominently on the letter to be received by the principal with the packet of questionnaires for the department heads in each school. It was expected that the principals would understand the significance of the ACSA endorsement and would more strongly encourage their department heads to participate in the study.

Each questionnaire was accompanied by a brief, explanatory letter to the department head (Appendix K). The questionnaire letters to department heads of schools for whom the principal had returned the response card were addressed personally with the name of the department head. Packets were also sent to schools whose principals had not responded with department head names. For such schools, the letters were addressed to "Department Head for English," and so on, as appropriate (Appendix L). A followup reminder card addressed to the principal with the attention of the principal's secretary was sent to each school within ten days of shipment of the packet of questionnaires (Appendix M).

Questionnaires for members of the organized sample of alternate respondents were included in the appropriate packets and incorporated into the mainstream process as here described. Questionnaires for the organized sample of non-respondents were mailed 30 to 60 days after receipt of the main body of prime sample responses. These questionnaires constituted a second mailing of the same questionnaires to the selected non-respondents. The questionnaires were mailed individually and were accompanied by a special second letter appealing for response (Appendix N). Questionnaires for both subsamples were coded so as to preclude duplication of data should the targeted department head later mail the questionnaire from the original mailing.

Organization of the Data

Before beginning the identification of the sample, the investigator established a master calendar of activities for the data-gathering phase of the project. Such activities included compiling school directories and reference manuals; drafting, pilot-testing, revising, and printing the questionnaire; identifying and committing to target dates for the mailings, sending follow-up cards to non-respondents, etc.

To manage the large amount of correspondence, handle numbers of different classes of response, and maintain reasonable progress, the investigator found it efficient to establish a card-sort system early in the process. Using Royal-McBee cards, a manual punch, and a sorting pick, the investigator was able to track the large amounts of incoming and outgoing data with less difficulty than one might otherwise expect to encounter in a project of relative complexity.

Analysis of the Data

The data were transferred from completed questionnaires to FORTRAN coding forms and keypunched therefrom. The data were processed on a Burroughs B6700 computer. Analysis programs were from N. H. Nie, et al.[1] The descriptive statistics subprograms used were FREQUENCIES, BREAKDOWN, and CROSSTABS.

For inferential statistics ONEWAY was employed. LSD was used as the a posteriori contrast test. The .05 level of significance was selected as most appropriate for balancing Type I and Type II error probability.[2,3]

SUMMARY

This chapter presented the methodology employed for the present study. Data for the study were acquired from a questionnaire administered by mail to a stratified random sample and subsamples consisting of the department heads in 260 California public high schools. The instrument employed in the study was constructed in response to the questions posed in Chapter 1. The questionnaire was pilot-tested and revised before being administered. Organization of the project data was calendared, and a card-sort system was used to track incoming data. Data were processed electronically in both descriptive and inferential modes.

---

[1] Norman H. Nie, et al., SPSS: Statistical Package for the Social Sciences (2d ed.; New York: McGraw-Hill, 1975).

[2] Type I error rejects the null hypothesis when the null hypothesis is actually true. Type II error fails to reject the null hypothesis when it is actually false.

[3] Audrey Haber and Richard Kenyon, General Statistics (Menlo Park: Addison-Wesley, 1971), pp. 171-178.

Chapter 4

PRESENTATION AND ANALYSIS OF THE DATA

The two major objectives of this study were (1) to determine the influence of education journals on classroom practice; and (2) to establish a profile of setting and characteristics of department heads whose leadership may illustrate the use of journal literature in effecting change in classroom practice.

To reach the objectives the investigator presented potential respondents with 40 questionnaire items to gain responses to the six general questions of the study and to test the four related hypotheses. To clarify the effect of the treatment, the hypotheses will be expressed in their null form.

In this chapter the results of analysis of the data are presented. Results are listed for convenient reference in the order of the questions of the study as discussed in Chapters 1 and 3. That order does not necessarily correspond with the order in which the items were presented in the questionnaire. The hypotheses all are subsumed under one question. Their analysis will be addressed in turn under Question 6. Commentary on the analysis will be offered in Chapter 5.

THE RESPONDENTS

A sample and two subsamples were subjects of this study. The subjects represented a population consisting of the department heads of California public high schools.

The Representativeness of the Respondents

The sample consisted of 1,264 department heads who were distributed among the five named departments. The respondents numbered 549, or 43.4 percent of the sample. Sixty-one respondents indicated leadership responsibility also for a second department or area of study. Four hundred three department heads (73.4 percent) responded to personally-addressed questionnaires. One hundred forty-six (26.6 percent) responded to questionnaires addressed to "Department Head for (Subject)."

The organized sample of alternate respondents was designed to include a department head from "other" departments for each of the 16 school population strata. Thirteen department heads from this group submitted data intended to differentiate leadership activities by named department.

The organized sample of non-respondents included 18 of the expected 26 department heads. All of these initially had been non-respondent members of the sample in one or more of the five named departments.

Table 4.1 presents the sample as defined by population strata and compared by the number and percentage for each with the respondents in the sample.

Table 4.1

Responses Distributed by Population Strata (N=549)

	Stratum	Sample Expected Percent	Responses Obtained Percent
Small Schools	1	2.1	.4
	2	6.7	4.7
	3	5.7	3.1
Medium-Size Schools	4	5.2	5.6
	5	3.8	4.4
	6	6.9	6.7
	7	8.9	9.5
	8	8.9	9.7
Large Schools	9	11.6	13.7
	10	10.6	12.2
	11	8.9	9.7
	12	7.6	6.0
	13	6.3	6.2
Very Large Schools	14	2.2	1.8
	15	1.4	1.6
	16	3.7	4.7
	TOTALS:	100.	100.

Table 4.1 shows the representativeness of the respondents to the sample in terms of percentage. The visualization of the comparison was intensified by grouping respondents from small, medium-size, large, and very large high schools. These size differentiations were established by the investigator to enhance comparisons. For only the small schools may other than relatively minor differences from expected percentage be observed.

Table 4.2 illustrates the component department head respondents of the sample analyzed as to number and percentage.

Table 4.2

Respondents Distributed by Leadership Responsibility (N=549)

Area of Leadership	Number of Respondents	Percent (Adjusted)
English	125	23.2
Mathematics	113	21.0
Physical Ed.	104	19.3
Science	89	16.5
Social Science	94	17.5
Other	13	2.4
No Response	11	0.0
TOTALS	549	100.

Table 4.2 serves to illustrate that English and mathematics department heads responded most frequently. The English department heads responded in a number well above the mean. Physical education and social science heads occupied positions respectively slightly above and slightly below the mean of respondents. Science department heads were slightly less well-represented in the sample than were other heads. The 13 department heads who had responsibility for "other" departments constituted the organized sample of alternate respondents and were included in computing the mean of department respondents. Eleven department heads failed to respond to questionnaire items 5-11, the leadership items.

Table 4.3

Percentage Relationship of the Sample with Its Component Departments and with the Subsamples (N=549)

Stratum	Sample (N=549)[1]	English (n=125)	Math (n=113)	Phys.Ed. (n=104)	Science (n=89)	Social Science (n=94)	Alternate Subsample (n=13)	Non-Resp. Subsample (n=18)[2]
1	2.1	.8	0	0	1.1	0	0	0
2	6.7	5.6	6.2	5.8	2.2	4.3	0	0
3	5.7	1.6	3.5	2.9	2.2	4.3	7.7	5.6
4	5.2	5.6	7.1	4.8	4.5	6.4	7.7	5.6
5	3.8	4.8	4.4	4.8	2.2	5.3	7.7	5.6
6	6.9	7.2	6.2	7.7	6.7	5.3	7.7	16.6
7	8.9	8.8	9.7	10.6	11.2	8.5	7.7	0
8	8.9	10.4	6.2	9.6	7.9	10.6	7.7	11.1
9	11.6	15.2	11.5	13.5	15.7	14.9	7.7	27.7
10	10.6	11.2	14.2	12.5	16.9	8.5	7.7	5.6
11	8.9	9.6	13.3	7.7	10.1	8.5	7.7	5.6
12	7.6	5.6	4.4	5.8	6.7	8.5	7.7	0
13	6.3	6.4	8.0	6.7	2.2	7.4	7.7	0
14	2.2	.8	.9	1.0	1.1	1.1	7.7	0
15	1.4	1.6	.9	1.0	3.4	2.1	0	5.6
16	3.7	4.8	3.5	5.8	5.6	4.3	7.6	11.0
TOTALS	100.	100.	100.	100.	100.	100.	100.	100.

[1] N=549 when adjusted with 11 responses which were not identified as to leadership status.

[2] This number is distributed from among the five named departments at left.

Table 4.3 expresses in percentage the relationships among the represented departments and with the strata of the sample. The table also illustrates the percentage relationships of the alternate and non-respondent subsamples with the sample. Except at the lowest strata, each of the component departments bears close percentage relationship with the percentage distribution for the sample. The 14 members of the alternate subsample were distributed one each through all strata but the first and the fifteenth.

Other Selected Characteristics of the Respondents

Certain of the responses were appropriate to be explicated under the section, "Questions of the Study," in this chapter below, as the responses provided answers to those questions. Other responses do not apply so specifically to the questions of the study and were selected to serve general comparison purposes. Those other characteristics will be analyzed in this section as Tables 4.4 through 4.12.

Table 4.4

Gender of the Department Heads (N=549)

	ALL DEPTMTS (N-549)		ENGLISH (n=125)		MATH (n=113)		PHYSICAL EDUC (n=104)		SCIENCE (n=89)		SOCIAL SCIENCE (n=94)		OTHER DEPTS (n=13)	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
FEMALES	157	29.7	66	53.2	17	15.5	38	38.4	14	15.9	16	17.2	6	46.2
MALES	372	70.3	58	46.8	93	84.5	61	61.6	74	84.1	77	82.8	7	53.8
COLUMN TOTALS	529	100.	124	100.	110	100.	99	100.	88	100.	93	100.	13	100.

Table 4.4 illustrates that male department heads predominated in total number over females in the study by more than two to one. The one department serving as exception was English, for which a small majority of leaders were women.

Table 4.5

Length of Service in Leadership Positions of Department Heads (N=549)

	ALL DEPTMTS (N-549)		ENGLISH (n=125)		MATH (n=113)		PHYSICAL EDUC (n=104)		SCIENCE (n=89)		SOCIAL SCIENCE (n=94)		OTHER DEPTS (n=13)	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
1-5 YEARS	224	41.8	75	60.5	39	34.8	39	37.5	30	33.7	38	40.4	3	23.1
6-10 YEARS	129	24.1	26	21.	31	27.7	19	18.3	22	24.7	27	28.7	4	30.8
11-15 YEARS	78	14.6	12	9.7	20	17.9	16	15.4	12	13.5	17	18.1	1	7.7
16+ YEARS	105	19.6	11	8.9	22	19.6	30	28.8	25	28.1	12	12.8	5	38.5
COLUMN TOTALS	536	100	124	100.	112	100.	104	100.	89	100.	94	100.	13	100.

Table 4.5 shows that almost half of the respondents had been department head for five years or less. Two-thirds had been department heads for 10 years or less. A third had served in department leadership positions for 11 or more years.

Table 4.6

School Setting of the Department Heads (N=549)

	ALL DEPTMTS (N-549)		ENGLISH (n=125)		MATH (n=113)		PHYSICAL EDUC (n=104)		SCIENCE (n=89)		SOCIAL SCIENCE (n=94)		OTHER DEPTS (n=13)	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
URBAN	93	18.1	18	15.3	14	13.2	22	22.	19	22.1	18	20.	2	15.4
SUBURBAN	272	53.	68	57.6	57	53.8	44	44.	49	57.	47	52.2	7	53.8
RURAL	148	28.8	32	27.1	35	33.	34	34.	18	20.9	25	27.8	4	30.8
COLUMN TOTALS	513	100.	118	100.	106	100.	100	100.	86	100.	90	100.	13	100.

Table 4.6 describes slightly more than half of the department heads as serving in suburban schools and but a fifth in urban schools. These proportions held constant across all departments.

Table 4.7

School Enrollment Status of the Department Heads (N=549)

	ALL DEPTMTS (N-549)		ENGLISH (n=125)		MATH (n=113)		PHYSICAL EDUC (n=104)		SCIENCE (n=89)		SOCIAL SCIENCE (n=94)		OTHER DEPTS (n=13)	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
DECLINING	224	42.	42	34.7	52	46.	45	43.7	34	38.6	41	44.1	8	61.5
STABLE	174	32.6	46	38.	31	27.4	32	31.1	30	34.1	31	33.3	4	30.8
INCREASING	135	25.3	33	27.3	30	26.5	26	25.2	24	27.3	21	22.6	1	7.7
COLUMN TOTALS	533	100.	121	100.	113	100.	103	100.	88	100.	93	100.	13	100.

Table 4.7 illustrates that nearly half of the respondents served in schools with declining student populations. Only a quarter of the respondents described enrollment as increasing.

Table 4.8

Self-Assessed Innovativeness and Professional Currency of Department Heads (N=549)

	ALL DEPTMTS (N-549)		ENGLISH (n=125)		MATH (n=113)		PHYSICAL EDUC (n=104)		SCIENCE (n=89)		SOCIAL SCIENCE (n=94)		OTHER DEPTS (n=13)	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
POOR	8	1.5	0	0	4	3.6	2	1.9	0	0	2	2.2	0	0
FAIR	67	12.7	13	10.5	18	16.4	12	11.7	7	8.3	16	17.2	1	7.7
GOOD	305	57.9	71	57.3	64	58.2	62	60.2	54	64.3	47	50.5	7	53.8
EXCELLENT	147	27.9	40	32.3	24	21.8	27	26.2	23	27.4	28	30.1	5	38.5
COLUMN TOTALS	527	100.	124	100.	110	100.	103	100.	84	100.	93	100.	13	100.

Table 4.8 reveals that department heads across all departments gave themselves high marks on innovativeness and on keeping up with knowledge in their fields. Of the named departments, science heads considered the currency of their own professional knowledge highest, followed closely by English and physical education leaders. Mathematics and social science department heads trailed the others, but the percentage range from highest to lowest was less than 11. Heads of the other departments in the alternate subsample self-rated their being up-to-date as highest of any respondents.

Table 4.9

Whether Department Heads Designed New Courses or Units (N=549)

	ALL DEPTMTS (N-549)		ENGLISH (n=125)		MATH (n=113)		PHYSICAL EDUC (n=104)		SCIENCE (n=89)		SOCIAL SCIENCE (n=94)		OTHER DEPTS (n=13)	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
YES	453	85.8	115	93.5	96	86.5	90	89.1	71	81.6	74	80.4	7	53.8
NO	75	14.2	8	6.5	15	13.5	11	10.9	16	18.4	18	19.6	6	46.2
COLUMN TOTALS	528	100.	123	100.	111	100.	101	100.	87	100.	92	100.	13	100.

Table 4.9 presents data that show department heads as designers of new courses or units of study within the last two years. Most of the English heads so described themselves. Four-fifths of the other groups of named heads organized such change. The other department heads of the alternate subsample reported less course design work.

Table 4.10

Whether Department Heads Supervised a Beginning Teacher or Student Teacher (N=549)

	ALL DEPTMTS (N-549)		ENGLISH (n=125)		MATH (n=113)		PHYSICAL EDUC (n=104)		SCIENCE (n=89)		SOCIAL SCIENCE (n=94)		OTHER DEPTS (n=13)	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
YES	281	54.2	66	55.	46	41.8	63	63.6	43	50.6	58	63.7	5	41.7
NO	237	45.8	54	45	64	58.2	36	36.4	42	49.4	33	36.3	7	58.3
COLUMN TOTALS	518	100.	120	100.	113	100.	99	100.	85	100.	91	100.	12	100.

Table 4.10 shows that a slight majority of department heads supervised a beginning teacher or student teacher within the previous two years. Physical education and social science department heads reported slightly greater frequency of such supervision than did the others. Mathematics department heads reported less such supervision than did the heads of the other named departments. Respondents for the alternate subsample showed a low supervision percentage.

Table 4.11

Whether Department Heads Initiated One or More Classroom Changes (N=549)

	ALL DEPTMTS (N=549)		ENGLISH (n=125)		MATH (n=113)		PHYSICAL EDUC (n=104)		SCIENCE (n=89)		SOCIAL SCIENCE (n=94)		OTHER DEPTS (n=13)	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
YES	496	94.3	120	97.6	103	94.5	91	92.9	84	95.5	85	90.4	12	92.3
NO	30	5.5	3	2.4	6	5.5	7	7.1	4	4.5	9	9.6	1	7.7
COLUMN TOTALS	526	100.	123	100.	109	100.	98	100.	88	100.	94	100.	13	100.

Table 4.11 shows that almost 95 percent of the department heads initiated at least one change in their classroom practice within the last two years. Within an extraordinarily high percentage range, English department heads reported highest; social science heads, lowest.

Table 4.12

Self-Assessed Reading Ability of Department Heads (N=549)

	ALL DEPTMTS (N=549)		ENGLISH (n=125)		MATH (n=113)		PHYSICAL EDUC (n=104)		SCIENCE (n=89)		SOCIAL SCIENCE (n=94)		OTHER DEPTS (n=13)	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
POOR	2	.4	0	0	1	.9	1	1	0	0	0	0	0	0
FAIR	36	6.7	0	0	15	13.4	15	14.4	4	4.5	1	1.1	1	7.7
GOOD	207	38.7	38	30.9	44	39.3	48	47.2	37	41.6	35	37.6	4	30.8
EXCELLENT	289	54.	85	69.1	52	46.4	4	37.4	48	53.9	57	61.3	8	61.5
COLUMN TOTALS	535	100.	123	100.	112	100.	103	100.	89	100.	93	100.	13	100.

Table 4.12 illustrates that more than four-fifths of the department heads considered themselves to be good or excellent readers. One hundred percent of the English heads reported themselves as good or excellent. Fewer physical education and mathematics heads assessed their reading ability as good to excellent.

The questionnaire provided department heads with opportunity to complete sentences describing why they read journals or why they did not read them. Responses to the first prompt, "When I read education journals, I usually do so because..." will be discussed under Question 6 below. Responses to the prompt, "I read little or nothing in the journals because..." will be analyzed here. The completed sentences were classified by the investigator and subsumed under nine categories for each.

Stated approximately in the phraseology of the respondents, the categories for "I read little or nothing..." were constituted as follows:

1. I don't have time. I haven't made the time. Other activities have higher priority.

2. Journal articles are not practical (or) not helpful (or) not relevant (or) not applicable to my situation.

3. Journal articles are too often poorly written (or) dull (or) tedious (or) boring (or) self-serving (or) a waste of time (or) out of touch with classroom reality.

4. Journals are too expensive. I have no budget.

5. I prefer to get my information from my colleagues and other sources.

6. I prefer reading mostly in my subject field.

7. Journals are not easily available. I'm not familiar with any journals. I don't subscribe.

8. I don't like to read. I don't read well.

9. I'm too tired after my daily labors. I'm lazy. I'm not interested.

The few especially colorful negative responses were subsumed under item three above.

Table 4.13

Reasons Given by Department Heads for Not Reading Journals (N=249)

	ALL DEPTMTS (N=249)		ENGLISH (n=125)		MATH (n=113)		PHYSICAL EDUC (n=104)		SCIENCE (n=89)		SOCIAL SCIENCE (n=94)		OTHER DEPTS (n=13)	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
NO TIME TO READ	89	27.4	23	28.	24	38.7	16	30.2	8	16.7	17	22.6	1	20.
J's NOT HELPFUL	136	41.8	39	47.6	21	33.9	17	32.	28	58.2	28	37.3	3	60.
J's DULL	40	12.3	9	11.	6	9.7	7	13.2	4	8.3	14	18.7	0	0
J's EXPENSIVE	7	2.2	1	1.2	1	1.6	1	1.9	3	6.3	1	1.3	0	0
PREFER COLLEAGUES	15	4.6	6	7.3	3	4.8	3	5.7	1	2.1	2	2.7	0	0
PREFER SUBJECT	9	2.8	1	1.2	0	0	2	3.8	0	0	5	6.7	0	0
J's UNAVAILABLE	21	6.5	2	2.5	6	9.7	5	9.4	3	6.3	5	6.7	0	0
DO NOT READ	4	1.2	0	0	0	0	2	3.8	1	2.1	1	1.3	0	0
TOO TIRED	4	1.2	1	1.2	1	1.6	0	0	0	0	2	2.7	0	0
COLUMN TOTALS	325	100.	82	100.	62	100.	53	100.	48	100.	75	100.	5	100.

Table 4.13 shows that of all those who responded to the prompt, close to half declared the journals to be "not helpful." More than a quarter attributed their not reading to not having the time to do so. The third most frequent reason given for not reading was that the journals "are dull." Nearly a fifth of social science respondents expressed that opinion.

Of the less-frequently expressed reasons, 7.3 percent of the English heads noted that they preferred conversation with their colleagues to reading the journals. Nearly 10 percent of the mathematics and physical education department heads remarked that journals were not available to them.

Thirty-one department heads apparently had strong enough feelings about the subject of journals that they added commentary to the questionnaire, representative elements of which are here reproduced:

> Most journals seem to be Eastern-oriented and directed to upper middle class populations. There seems to be little understanding of or interest in the problems of teaching average students in districts which do not have enough money for classroom necessities.
>
> (Education journals) are so urban in their approach that any (practical content) is often of little use for a rural setting.
>
> In case you didn't know, Proposition 13 killed off designing and trying new courses. Declining enrollment is killing off the student teacher and beginning teacher supervision possibilities.
>
> (Journal articles) remind me of the worst teachers I ever had --those in college education courses.
>
> Teaching is such a personal and individual process that I have little interest and find little value in other teachers' projects, experiences, etc. Many (articles) make a big deal out of things I consider usual and normal and have done in my class for the past 10 years.
>
> This survey is bias (sic) toward journals. Within the last two years, we have attended many conferences, meetings, interviews, and observations, read extensively and initiated a new course. None of this from magazines.

The Alternate and Non-Respondent Subsamples

The organized sample of alternate respondents consisted of 16 randomly-selected heads of those departments whose main course offerings were not required by the State for high school graduation. Fourteen of these department heads participated. The data for this subsample are presented in each of the tables above as "Other Departments."

The organized sample of non-respondents were randomly selected from among those members of the sample who did not initially respond to the questionnaire. These 26 department heads were contacted several times by letter. Eighteen of them responded. Their data have been included as part of the sample. Those data were potentially interesting as part of a subsample. Their number fell considerably short of comprising the intended 10 percent of the sample. Analysis of the few responses as a subsample would serve no useful purpose in this study as they are markedly similar in every respect to those of the sample.

RESPONSES TO THE QUESTIONS OF THE STUDY

The questions of the study and the data for each will be presented in number order. The hypotheses are related to Question 6.

Question 1: What Are the Changes in Practice That Department Heads Report Have Been Stimulated by Journal Literature?

Changes in practice and change sources reported by the department heads were readily classifiable. Processed data would be rendered more sensible by their having been classified. Therefore, reported changes in practice were categorized into eight groups, titled as follows:

1. Motivation
2. Discipline/management
3. Curriculum design
4. Teaching techniques
5. Grouping for instruction

6. Teaching materials
7. Testing/evaluation
8. Public information/public relations

For the same reasons, the sources of the reported changes in practice were combined also, into 14 groups, titled as follows:

1. English journals
2. Mathematics journals
3. Physical education journals
4. Science journals
5. Social science journals
6. Other-subject curriculum journals
7. General education journals
8. General interest publications
9. Other literature and media
10. Educational consultants
11. Professional associations
12. Colleagues and students
13. Educational professionals elsewhere
14. On-site inservice training

Table 4.14

Journal-Stimulated Changes in Practice
Reported by ALL Department Heads (N=538)

Change Source	ENGLISH JOURNALS		MATH JOURNALS		PHYSICAL EDUCATION JOURNALS		SCIENCE JOURNALS		SOCIAL SCIENCE JOURNALS		OTHER SUBJECT JOURNALS		GENERAL EDUCATION JOURNALS		GENERAL INTEREST JOURNALS		ROW TOTALS	
Change Type	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
MOTIVATION	0	0	2	11.1	1	3.6	0	0	0	0	0	0	3	8.3	0	0	6	3.6
DISCIPLINE/ MANAGEMENT	1	4.8	1	5.6	4	14.3	1	2.2	1	7.7	0	0	6	16.7	1	25.	15	8.9
CURRICULUM DESIGN	5	23.7	4	22.2	9	32.1	13	28.3	6	46.1	0	0	5	13.9	2	50.	44	26.3
TEACHING TECHNIQUES	6	28.6	6	33.3	4	14.3	13	28.3	2	15.4	0	0	10	27.8	0	0	41	24.6
INSTRUCTIONAL GROUPING	0	0	0	0	1	3.6	0	0	0	0	0	0	3	8.3	1	25.	5	3.
TEACHING MATERIALS	1	4.8	4	22.2	6	21.4	5	10.8	2	15.4	1	100	5	13.9	0	0	24	14.4
TESTING/ EVALUATION	7	33.3	1	5.6	3	10.7	14	30.4	2	15.4	0	0	4	11.1	0	0	31	18.6
PUBLIC INFO/ RELATIONS	1	4.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	.6
COLUMN TOTALS	21	100	18	100	28	100	46	100	13	100	1	100	36	100	4	100	167	100

MEAN: 0.310

Represented in Table 4.14 are responses for the first eight sources of reported change, those sources identifying the classified journals as change sources. Appended for reference are reported changes in practice from other and all stimuli, for which stimuli were cited and not cited (Appendix O).

The 167 journal-stimulated changes in practice that were reported by all department heads were distributed in eight categories. The mean of journal-stimulated changes for all department heads was 0.310. The distribution among the change categories was by no measure even. On the other hand, no change category can be discerned as predominating.

Changes in curriculum design and in teaching techniques led the categories with 26.3 and 24.6 percent respectively. Changes in testing and evaluation accounted for 18.6 percent. Changes in teaching materials accumulated 14.4 percent. Discipline and classroom management changes were reported as 8.9 percent of the total. Motivation amounted to 3.6 percent, and instructional grouping to 3.0 percent. Public information changes produced only .6 percent of the journal-influenced changes.

Question 2: Are Journal-Influenced Changes in Practice Experienced Equally by the Departments Selected for Study?

Tables 4.15 through 4.19 present respectively the data from the subject-named department heads relating to the changes in their practice attributed to the influence of journals. Table 4.20 presents the alternate subsample data.

Table 4.15

Journal-Stimulated Changes in Practice Reported by ENGLISH Department Heads (N=125)

Change Source / Change Type	ENGLISH JOURNALS		MATH JOURNALS		PHYSICAL EDUCATION JOURNALS		SCIENCE JOURNALS		SOCIAL SCIENCE JOURNALS		OTHER SUBJECT JOURNALS		GENERAL EDUCATION JOURNALS		GENERAL INTEREST JOURNALS		ROW TOTALS	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
MOTIVATION	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DISCIPLINE/ MANAGEMENT	0	0	0	0	1	100	0	0	0	0	0	0	1	10	0	0	2	4.9
CURRICULUM DESIGN	5	25	0	0	0	0	1	14.3	1	100	0	0	0	10	0	0	8	19.5
TEACHING TECHNIQUES	6	30	0	0	0	0	2	28.6	0	0	0	0	3	30	0	0	11	26.9
INSTRUCTIONAL GROUPING	0	0	0	0	0	0	0	0	0	0	0	0	1	10	1	100	2	4.9
TEACHING MATERIALS	1	5	0	0	0	0	0	0	0	0	1	100	1	10	0	0	3	7.3
TESTING/ EVALUATION	7	35	0	0	0	0	4	57.1	0	0	0	0	3	30	0	0	14	34.1
PUBLIC INFO/ RELATIONS	1	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2.4
COLUMN TOTALS	20	100	0	0	1	100	7	100	1	100	1	100	10	100	1	100	41	100

MEAN: 0.328

Table 4.15 illustrates journal-stimulated changes of English department heads amounted to 41 such changes. The mean number of changes for the 125 department heads was 0.328. Changes in testing and evaluation accounted for 34.1 percent of the total. Changes in teaching techniques amounted to 26.9 percent. Curriculum design changes totaled 19.5. The remaining changes reported were relatively minor, with changes in teaching materials amounting to 7.3 percent; discipline and classroom management, 4.9 percent; instructional grouping, 4.9 percent; and public information/ public relations, 2.4 percent.

Table 4.16

Journal-Stimulated Changes in Practice Reported
by MATHEMATICS Department Heads (N=113)

Change Source / Change Type	ENGLISH JOURNALS		MATH JOURNALS		PHYSICAL EDUCATION JOURNALS		SCIENCE JOURNALS		SOCIAL SCIENCE JOURNALS		OTHER SUBJECT JOURNALS		GENERAL EDUCATION JOURNALS		GENERAL INTEREST JOURNALS		ROW TOTALS	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
MOTIVATION	0	0	2	11.1	0	0	0	0	0	0	0	0	0	0	0	0	2	5.9
DISCIPLINE/ MANAGEMENT	0	0	1	5.6	0	0	0	0	1	100	0	0	1	25	0	0	3	8.8
CURRICULUM DESIGN	0	0	4	22.2	0	0	1	11.1	0	0	0	0	0	0	0	100	6	17.7
TEACHING TECHNIQUES	0	0	6	33.3	1	100	0	0	0	0	0	0	2	50	0	0	9	26.5
INSTRUCTIONAL GROUPING	0	0	0	0	0	0	0	0	0	0	0	0	1	25	0	0	1	2.9
TEACHING MATERIALS	0	0	4	22.2	0	0	1	11.1	0	0	0	0	0	0	0	0	5	14.7
TESTING/ EVALUATION	0	0	1	5.6	0	0	7	77.8	0	0	0	0	0	0	0	0	8	23.5
PUBLIC INFO/ RELATIONS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
COLUMN TOTALS	0	0	18	100	1	100	9	100	1	100	0	0	4	100	1	100	34	100

MEAN: 0.301

Table 4.16 shows that journal-affected changes among mathematics department heads amounted to 34, with a mean of 0.301 changes. The predominating changes reported by the mathematics heads were in teaching techniques and in testing, with 26.5 and 23.5 percent of the changes respectively. Changes in curriculum design and teaching materials accounted for another third of the mathematics changes.

Table 4.17

Journal-Stimulated Changes in Practice Reported by PHYSICAL EDUCATION Department Heads (N=104)

Change Source	ENGLISH JOURNALS		MATH JOURNALS		PHYSICAL EDUCATION JOURNALS		SCIENCE JOURNALS		SOCIAL SCIENCE JOURNALS		OTHER SUBJECT JOURNALS		GENERAL EDUCATION JOURNALS		GENERAL INTEREST JOURNALS		ROW TOTALS	
Change Type	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
MOTIVATION	0	0	0	0	1	4.2	0	0	0	0	0	0	1	10	0	0	2	5.6
DISCIPLINE/ MANAGEMENT	0	0	0	0	3	12.5	0	0	0	0	0	0	1	10	1	100	5	13.9
CURRICULUM DESIGN	0	0	0	0	8	33.3	1	100	0	0	0	0	2	20	0	0	11	30.5
TEACHING TECHNIQUES	0	0	0	0	3	12.5	0	0	0	0	0	0	2	20	0	0	5	13.9
INSTRUCTIONAL GROUPING	0	0	0	0	1	4.2	0	0	0	0	0	0	1	10	0	0	2	5.6
TEACHING MATERIALS	0	0	0	0	6	25	0	0	0	0	0	0	2	20	0	0	8	22.2
TESTING/ EVALUATION	0	0	0	0	2	8.3	0	0	0	0	0	0	1	10	0	0	3	8.3
PUBLIC INFO/ RELATIONS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
COLUMN TOTALS	0	0	0	0	24	100	1	100	0	0	0	0	10	100	1	100	36	100

MEAN: 0.346

Table 4.17 highlights the fact that of the 36 journal-influenced changes reported for physical education department heads, almost a third were in the area of curriculum design. Physical education department heads established a mean of 0.346 journal-influenced changes. Teaching materials accounted for 22.2 percent. Discipline and teaching techniques followed with 13.9 percent each. A minor amount of change was influenced in the areas of testing, motivation, and grouping.

Table 4.18

Journal-Stimulated Changes in Practice Reported by SCIENCE Department Heads (N=89)

Change Source	ENGLISH JOURNALS		MATH JOURNALS		PHYSICAL EDUCATION JOURNALS		SCIENCE JOURNALS		SOCIAL SCIENCE JOURNALS		OTHER SUBJECT JOURNALS		GENERAL EDUCATION JOURNALS		GENERAL INTEREST JOURNALS		ROW TOTALS	
Change Type	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
MOTIVATION	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DISCIPLINE/ MANAGEMENT	0	0	0	0	0	0	0	0	0	0	0	0	2	50	0	0	2	6.5
CURRICULUM DESIGN	0	0	0	0	1	100	10	38.5	0	0	0	0	1	25	0	0	12	38.7
TEACHING TECHNIQUES	0	0	0	0	0	0	11	42.3	0	0	0	0	0	0	0	0	11	35.4
INSTRUCTIONAL GROUPING	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TEACHING MATERIALS	0	0	0	0	0	0	3	11.5	0	0	0	0	1	25	0	0	4	12.9
TESTING/ EVALUATION	0	0	0	0	0	0	2	7.7	0	0	0	0	0	0	0	0	2	6.5
PUBLIC INFO/ RELATIONS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
COLUMN TOTALS	0	0	0	0	1	100	26	100	0	0	0	0	4	100	0	0	31	100

MEAN: 0.348

Table 4.18 makes clear that science department heads reported a mean of 0.348 journal-stimulated changes. Such changes were mostly in the areas of curriculum design and in teaching techniques, with 38.7 and 35.4 percent of the total respectively. Changes in teaching materials, in discipline, and in testing and evaluation accounted for the remainder of such changes.

Table 4.19

Journal-Stimulated Changes in Practice Reported by SOCIAL SCIENCE Department Heads (N=94)

Change Source	ENGLISH JOURNALS		MATH JOURNALS		PHYSICAL EDUCATION JOURNALS		SCIENCE JOURNALS		SOCIAL SCIENCE JOURNALS		OTHER SUBJECT JOURNALS		GENERAL EDUCATION JOURNALS		GENERAL INTEREST JOURNALS		ROW TOTALS	
Change Type	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
MOTIVATION	0	0	0	0	0	0	0	0	0	0	0	0	2	33.3	0	0	2	9.5
DISCIPLINE/ MANAGEMENT	1	100	0	0	0	0	0	0	0	0	0	0	1	16.7	0	0	2	9.5
CURRICULUM DESIGN	0	0	0	0	0	0	0	0	5	45.4	0	0	1	16.7	1	100	7	33.3
TEACHING TECHNIQUES	0	0	0	0	0	0	0	0	2	18.2	0	0	1	16.7	0	0	3	14.3
INSTRUCTIONAL GROUPING	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TEACHING MATERIALS	0	0	0	0	0	0	1	50	2	18.2	0	0	1	16.7	0	0	4	19.1
TESTING/ EVALUATION	0	0	0	0	0	0	1	50	2	18.2	0	0	0	0	0	0	3	14.3
PUBLIC INFO/ RELATIONS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
COLUMN TOTALS	1	100	0	0	0	0	2	100	11	100	0	0	6	100	1	100	21	100

MEAN: 0.223

Table 4.19 shows that social science department heads reported 21 journal-influenced changes in their practice and a mean of 0.223 changes. A third of the changes were in the area of curriculum design. Changes in teaching materials amounted to 19.1 percent of the total. Changes in teaching techniques and testing accounted for 14.3 percent of the changes each. Changes in motivation and discipline totaled 9.5 each.

Table 4.20

Journal-Stimulated Changes in Practice Reported by OTHER Department Heads (N=13)

Change Source	ENGLISH JOURNALS		MATH JOURNALS		PHYSICAL EDUCATION JOURNALS		SCIENCE JOURNALS		SOCIAL SCIENCE JOURNALS		OTHER SUBJECT JOURNALS		GENERAL EDUCATION JOURNALS		GENERAL INTEREST JOURNALS		ROW TOTALS	
Change Type	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
MOTIVATION	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DISCIPLINE/ MANAGEMENT	0	0	0	0	0	0	1	100	0	0	0	0	0	0	0	0	1	25
CURRICULUM DESIGN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TEACHING TECHNIQUES	0	0	0	0	0	0	0	0	0	0	0	0	2	100	0	0	2	50
INSTRUCTIONAL GROUPING	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TEACHING MATERIALS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TESTING/ EVALUATION	0	0	0	0	1	100	0	0	0	0	0	0	0	0	0	0	1	25
PUBLIC INFO/ RELATIONS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
COLUMN TOTALS	0	0	0	0	1	100	1	100	0	0	0	0	2	100	0	0	4	100

MEAN: 0.308

Table 4.20 represents department heads in the alternate subsample. The table illustrates that department heads of other curriculum areas reported four journal-influenced changes for a mean of 0.308. Changes in teaching techniques accounted for 50 percent of the change. Discipline and testing changes split the remainder.

Question 3: Which Publications Do High School Department Heads Cite as Having Most Direct or Practical Value in Their Classroom Practice?

Department heads reported titles for 341 publications. In fact, the variety of publications probably is a small number fewer than reported as a result of apparent inaccuracy in department head listing of titles and names which appeared to be occasional duplications or errors of reporting.

For example, *Phi Beta Kappan* was reported as an influential journal. The respondent probably meant *Phi Delta Kappan*, but might have meant *American Scholar*, the journal of Phi Beta Kappa, although that journal was not listed as such by any respondent. However, as all titles were subsumed under a limited number of categories, the investigator accepted each title as reported.

Although the original intent of the study was to provide a prioritized list of individual titles, this proved statistically impossible. To render data display and interpretation possible, the journals were assigned identification numbers and collapsed into eight groups on the basis of contents. The first six groups represented subject matter; the seventh, general education. The eighth group consisted of the general interest publications. Appendix P contains all the cited publications, classified and listed by title.

The data provided at least two perspectives on Question 3, with the first, general, perspective having two parts. Questionnaire items 56-60 and 61-64 enabled department heads to list not only the journal titles of publications they found directly and practically valuable in their practice, but also those publications that they read but found had less direct and practical value. The two may be closely or distantly related in the minds of the respondents. However, the differentiation of the terms "direct" and "indirect" when viewed in the context of the questionnaire presented no problems of interpretation in the pilot-testing of the instrument. The investigator believes that the definitions presented in Chapter 1 were understood by respondents:

> Influence of journals on practice, direct: journal contents typically serve the reader as stimuli to take action, alter environment, or change attitude in one's own academic province.
>
> Influence of journals on practice, indirect: Journal contents typically provide the reader with information in contexts appropriate for improved understanding of positions and problems including those removed from the reader's own academic province.

For convenience of reference, the responses for both are included as parts of Table 4.21 below.

Table 4.21 illustrates the number and percentage of publications reported by all department heads as having most direct or practical value for use in their classrooms. The table also identifies for comparison the citations identifying those publications reported by all department heads as having value, but less direct or practical value than those reported first.

Table 4.21

Citations of Publications Reported by All Department Heads as Having Direct and Indirect Value in Stimulating Change in Classroom Practice (N=538)

Classification of Publication	Direct Value Publications Number	Direct Value Publications Percent	Indirect Value Publications Number	Indirect Value Publications Percent
English	139	16.1	25	5.7
Mathematics	100	11.5	20	4.5
Physical Education	167	19.3	33	7.5
Science	178	20.6	78	17.8
Social Science	73	8.4	17	3.8
Other Subjects	23	2.7	4	.9
General Education	150	17.3	229	52.1
General Interest	36	4.1	34	7.7
TOTALS	866	100.	440	100.
Means	1.577		0.802	

Table 4.21 demonstrates that from the perspective of general influence, more journals of science were reported as having direct and practical value than those of any other classification. The journals of physical education, general education, and English were cited closely behind the science journals. The four leading journal types spanned a range of from 16.1 to 20.6 percent. The journals of mathematics had 11.5 percent of the total. The journals of social science accounted for 8.4 percent. General interest and other curriculum publications accumulated 6.8 percent of the total.

Department heads as a group listed a mean of 1.577 publications.

The department heads listed nearly twice as many direct-value journals as indirect-value journals. However, it may be noted as a matter of comparison that science journals enjoyed a ranking in the indirect value scale second only to that achieved by the general education journals. Of those journals listed as providing indirect value, 52.1 percent were found in the general education category. Included in that category were the journals of the educator advocacy organizations.

The specific-influence perspective on the question is composed of the identification by department heads of changes in their practice with journal titles. Questionnaire items 65-72 constituted in effect a reifying of items 56-60, asking respondents to detail the changes they had made and to identify the source or stimulus of each such change.

Table 4.22 illustrates the sources of changes in practice in each of the departments. For convenience of comparison, the table includes not only the eight journal change sources, but also the additional six sources. The combined sources account for all change whose source was specifically identified.

Table 4.22

All Sources of Reported Change in Classroom Practice (N=549)

DEPARTMENTS	ENGLISH (n=125)			MATH (n=113)			PHYS ED (n=104			SCIENCE (n=89)			SOC SCI (n=94)			OTHERS (n=13)			ROW TOTALS		
	n	%1-8	%T	n	%1-8	%T	n	. %1-8	%T	n	%1-8	%T	n	%1-8	%T	n	%1-8	%T	n	%1-8	%T
SOURCES																					
1. English Journals	20	48.8	8.2	0	0	0	0	0	0	0	0	0	1	4.8	.7	0	0	0	21	12.6	2.4
2. Math Journals	0	0	0	18	52.9	10.3	0	0	0	0	0	0	0	0	0	0	0	0	18	10.8	2.1
3. Phys Ed Journals	1	2.4	.4	1	2.9	.6	24	66.6	17.9	1	3.2	.7	0	0	0	1	25.	5.9	28	16.7	3.2
4. Science Journals	7	17.1	2.9	9	26.6	5.1	1	2.8	.8	26	83.9	17.3	2	9.5	1.3	1	25.	5.9	46	27.5	5.2
5. Soc Science Journals	1	2.4	.4	1	2.9	.6	0	0	0	0	0	0	11	52.4	7.4	0	0	0	13	7.8	1.5
6. Other Subj. Journals	1	2.4	.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	.6	.1
7. Gen'l. Ed. Journals	10	24.5	4.1	4	11.8	2.3	10	27.8	7.5	4	12.9	2.7	6	28.5	4.	2	50.	11.8	36	21.6	4.2
8. Gen'l. Int. Journals	1	2.4	.4	1	2.9	.6	1	2.8	.8	0	0	0	1	4.8	.7	0	0	0	4	2.4	.5
SUBTOTALS	41	100	16.8	34	100	24.9	36	100	27.0	31	100	20.7	21	100	14.1	4	100	23.6	167	100	19.2
Means:	0.328			0.301			0.346			0.348			0.223			0.308			0.310		
9. Other lit./media	4		1.7	5		2.9	3		2.2	9		6.	5		3.4	1		5.9	27		3.1
10. Educational Consult.	16		6.6	5		2.9	4		2.9	5		3.3	7		4.7	1		5.9	38		4.4
11. Profess'l. Assns.	13		5.4	9		5.1	4		2.9	8		5.3	8		5.3	1		5.9	43		5.
12. Colleagues/Studts.	78		32.2	76		43.4	47		35.2	66		44.	66		44.3	3		17.5	336		38.7
13. Ed.Profsls. Elsewhere	13		5.4	9		5.1	11		8.2	4		2.7	5		3.4	2		11.8	44		5.1
14. On-Site Inservice	77		31.8	37		21.1	29		21.6	27		18.	37		24.8	5		29.4	212		24.5
COLUMN TOTALS	242		100	175		100	134		100	150		100	149		100	17		100	867		100.
MEAN CHANGES	1.936			1.549			1.288			1.686			1.585			1.308			1.612		

Table 4.22 discloses that department heads as a group reported a total of 167 specific journal-influenced changes in their classroom practice. The mean number of all such changes was 0.310.

Of the eight journal categories, the journals of science stimulated the greatest number and percent (27.5) of changes among all the department heads. Those changes were chiefly in the areas of testing and evaluation, curriculum design, and teaching techniques. Other less-affected areas stimulated by science journals were teaching materials and discipline and classroom management.

General education was the category that accounted for 21.6 percent of the total journal-influenced changes. Teaching techniques were the changes most often stimulated by the general education journals. Other changes included those in discipline, curriculum design, and teaching materials. Less change was affected in testing and evaluation, instructional grouping, and motivation.

Physical education journals influenced 16.8 percent of the total journal-stimulated change. Within that percentage, curriculum design was the change most frequently indicated. Change in teaching materials was a fairly distant second in the ranking of physical education journal-stimulated changes. Discipline and teaching technique changes were reported next in frequency, followed by testing.

Instructional grouping and motivation ranked last in this group.

The journals of English provided 12.6 percent of the total journal-influenced classroom change. Department heads reported this change as represented most strongly in the areas of testing and evaluation and in teaching techniques, followed by curriculum design. Mentioned as minor changes were those in discipline, teaching materials, and public relations.

Mathematics journals stimulated 10.8 percent of the reported journal-influenced change. Teaching techniques was the change category most often cited. Changes in curriculum design and teaching materials were influenced by mathematics journals. Motivation, testing, and discipline were the minor changes.

The journals of social science stimulated 7.8 percent of these changes. The predominating area of change was in curriculum design. More distant in influence were changes in teaching techniques, teaching materials, and testing. Discipline accounted for a small part of the change stimulated by social science journals.

The general interest journals reported included publications that one might not ordinarily consider "education journals" but that served such a purpose in the opinion of the respondents. This category accounted for 2.3 percent of journal-influenced change. The changes were restricted to curriculum design, discipline, and instructional grouping.

Journals for subject matter areas other than those of the five major departments represented in the study exerted only .6 percent influence on change. One such change was reported in the area of teaching materials.

Question 4: Does Department Head Membership in Journal-Publishing Professional Organizations Relate to Reported Changes in Practice?

A situation similar to that regarding journal titles was encountered in the cataloguing of reported professional association memberships. Department heads indicated membership in a total of 171 such organizations (Appendix Q). However, in the naming of their professional associations, department heads occasionally transposed or replaced words in the association titles, as "California Humanities Association" and "Humanities Association of California." One may assume that these two are the same, but necessarily they were counted in the appended data as separate. Other probably erroneously reported organization names included California Council for Teachers of English" and "Association of California English Teachers," both likely variants of California Association of Teachers of English. Each such variant was subsumed under the same category. As the items were measured as categorical units, such errors produced no aberrations in the data analysis.

Reported professional organizations were categorized in nine groups for convenience of illustration:

1. English
2. Mathematics
3. Physical education
4. Science
5. Social Science
6. Other subject matter
7. General education and education-related
8. Educator advocacy
9. Other reported organizations

An assumption underlying Question 4 was that membership in professional associations very often carries with it journal subscriptions, conference privileges, and expanded opportunity for professional discussion. Such members might be considered apt to benefit actively from the professional stimulation of membership and might be considered more likely than non-members to be among those who report changes in practice, even though they might not actually recall, relate, and list a specific change and a specific journal.

The question was answered in two ways presented below. The first illustrates data identifying the professional association memberships of the department heads. The second shows reported changes in practice as they appear to relate to the professional memberships.

Table 4.23 illustrates the first perspective, the frequency and percentage of membership in professional organizations of all respondents.

Table 4.23

Membership of ALL Department Heads in Professional Associations (N=538)

Organizations	ENGLISH ORGNS		MATH ORGNS		PHYS EDUC ORGNS		SCIENCE ORGNS		SOC SCI ORGNS		OTHER SUBJECT ORGNS		GENL ED & RELTD ORGNS		EDUCATOR ADVOCACY ORGNS		OTHER REPORTED ORGNS		ROW TOTALS & MEANS	
Department Heads	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
ENGLISH (n=125)	141	97.2	1	.8	0	0	2	2	1	1.4	3	10.7	14	25	119	22.2	1	14.3	282	24
Means:	1.128														0.952				2.256	
MATHEMATICS (n=113)	1	.7	116	95.9	2	1.8	7	7	1	1.4	2	7.1	12	21.4	115	21.5	1	14.3	257	21.9
Means:			1.027												1.018				2.274	
PHYSICAL ED (n=104)	0	0	0	0	107	95.5	0	0	0	0	7	25	6	10.7	94	17.5	1	14.3	215	18.3
Means:					1.028										0.904				2.067	
SCIENCE (n=89)	0	0	4	4.3	0	0	90	90	2	2.9	1	3.6	8	14.3	89	16.6	1	14.3	195	16.6
Means:							1.011								1.000				2.191	
SOCIAL SCIENCE (n=94)	2	1.4	0	0	3	2.7	1	1	65	94.3	4	14.3	13	23.2	104	19.4	3	42.8	195	16.6
Means:									0.691						1.106				2.074	
OTHER (n=13)	1	.7	0	0	0	0	0	0	0	0	11	39.3	3	5.4	15	2.8	0	0	30	2.6
Means:											0.846				1.154				2.308	
COLUMN TOTALS :	145	100	121	100	112	100	100	100	69	100	28	100	56	100	536	100	7	100	1174	100
COLUMN MEANS (N=538) :	0.270		0.225		0.208		0.186		0.128		0.052		0.104		0.996		0.013		2.182	

Table 4.23 shows that mathematics department heads reported membership in a mean number of 2.274 professional organizations. Their ranks accounted for 95.9 percent of the reported memberships in mathematics organizations and a mean of 1.027 memberships in such organizations. Mathematics heads reported membership in 21.4 percent of the general education organizations. They represented 21.5 percent of reported membership in educator advocacy organizations, with a mean of 1.018 such memberships.

Nearly a quarter (24 percent) of the reported professional memberships were accounted for by English department heads. English heads reported membership in a mean of 2.256 organizations. They reported membership in an average of 1.128 English-related organizations and 0.952 educator advocacy organizations. English heads reported membership in a larger percentage (25 percent) of general education associations than did most other department heads.

Science department heads represented in the study belonged to an average of 2.191 professional associations. They accounted for 90 percent of the memberships in science organizations, for a mean of 1.011; and 16.3 percent of educator advocacy organization memberships, with a mean of 1.000.

Social science department heads reported a mean of 2.074 professional memberships. Of all the memberships for social science organizations, the social science heads accounted for 94.3 percent and a mean of 0.691 for such memberships. Social science heads belonged to 23.2 percent of the reported general education organizations. They accounted for 42.8 percent of "other reported organization" memberships. They had a mean of memberships in educator advocacy organizations of 1.106.

The heads of physical education departments belonged to a mean of 2.067 professional associations. They accounted for 95.5 percent of reported physical education organization memberships and showed a mean of 1.028 for such membership. They demonstrated 17.5 percent of educator advocacy memberships with a mean of 0.904 such memberships. Physical education heads accounted for 25 percent of the reported memberships in the organizations of other subject-matter areas.

The department heads for the other departments belonged to a mean of 2.308 professional associations. They accounted for 39.3 percent of memberships in the organizations representing "other" subject matter and showed a mean membership of 0.846. Their membership represented 2.8 percent of educator advocacy organizations, but showed a mean of 1.154.

The largest numbers and percentages of memberships were reported for subject-matter associations and for educator advocacy associations. Means for these classifications and for total membership are listed below.

Means for memberships of department heads in all reported professional organizations were as follows:

English	2.067
Mathematics	2.274
Physical education	2.067
Science	2.191
Social science	2.074
Other subjects	2.308

Of the subject-matter organization membership, means for the department heads were reported as follows:

English	1.128
Mathematics	1.027
Physical education	1.028
Science	1.011
Social science	0.691
Other departments	0.846

Means for memberships of department heads in the educator advocacy organizations were reported as follows:

English	0.952
Mathematics	1.018
Physical education	0.904
Science	1.000
Social science	1.106
Other departments	1.154

To provide the second perspective on Question 4, the investigator employed a frequency relationship index to illustrate the relationship between all reported changes and memberships in professional organizations. The index consisted of a product function of the number of categorized changes and the number of organizational memberships. The products so computed and their percentage equivalents remain constant in the change-membership matrix. The changes used in the index represented in Tables 4.24 through 4.30 were not limited to those inspired by journals, but included those affected by all stimuli.

Table 4.24

Frequency Index for ALL Department Heads between Their Changes in Practice and Their Membership in Professional Associations (N=538)

Organizations	ENGL ORGNS		MATH ORGNS		PHYS EDUC ORGNS		SCI ORGNS		SOC SCI ORGNS		OTHER SUBJ ORGNS		GENL ED & RELTD		EDUC ADVOC ORGNS		OTHER REPTD ORGNS		ROW TOTALS	
Change	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
MOTIVATION	6	1.9	4	1.7	10	4.7	5	2.5	2	1.4	2	5.1	5	4.	22	2.2	0	0	56	2.4
DISCIPLINE/ MANAGEMENT	47	14.5	41	17.6	42	19.5	29	14.4	24	17.3	7	17.9	23	18.3	194	19.4	3	20.	410	17.9
CURRICULUM DESIGN	75	23.2	40	17.2	36	16.7	48	23.8	34	24.5	7	17.9	27	21.3	218	21.8	4	26.7	489	21.3
TEACHING TECHNIQUES	83	25.6	63	27.	44	20.5	68	33.7	26	18.7	7	17.9	28	22.2	230	23.1	5	33.3	554	24.2
INSTRUCTIONAL GROUPING	11	3.4	11	4.7	4	1.9	3	1.5	3	2.2	2	5.1	4	3.2	28	2.8	0	0	66	2.9
TEACHING MATERIALS	15	4.6	24	10.3	42	19.5	23	11.4	28	20.1	6	15.6	16	12.7	123	12.3	3	20.	280	12.2
TESTING/ EVALUATION	82	25.3	50	21.5	37	17.2	26	12.7	22	15.8	7	17.9	23	18.3	183	18.4	0	0	430	18.8
PUBLIC INFO/ RELATIONS	5	1.5	0	0	0	0	0	0	0	0	1	2.6	0	0	1	.1	0	0	7	.3
COLUMN TOTALS	324	100	233	100	215	100	202	100	139	100	39	100	126	100	999	100	15	100	2292	100

Table 4.24 shows numbers and percentages between the changes and professional organization memberships of all the department heads. Tables 4.25 through 4.30 present the data as revealed for the separate departments.

For convenient reference the investigator established scales on which the produce percentage equivalents might be converted to relative terms. For organizations the scale is 0-99, very low; 100-199, low; 200-299, middle; 300-599, high; 600 and above, very high. The scale for changes is 0-99, very low; 100-399, middle; 400-549, high; 550 and above, very high. Table 4.24 illustrates that those department heads who belonged to educator advocacy groups were responsible for extraordinarily larger products than members of any other group. The membership products for the five curriculum organization groups showed English organizations high, social science and general education organizations low, and the organizations of mathematics, physical education, science, and general education rather alike at the lower-middle of the spectrum. Products for other subject-matter associations and other reported organizations were very low. The products for reported changes by memberships showed teaching techniques very high; curriculum design, testing, discipline, and teaching materials, middle; and grouping and motivation, low. The public relations change-membership product was very low.

Table 4.25

Frequency Index for ENGLISH Department Heads between
Their Changes in Practice and Their Membership
in Professional Associations (N=125)

Organizations	ENGL ORGNS		MATH ORGNS		PHYS EDUC ORGNS		SCI ORGNS		SOC SCI ORGNS		OTHER SUBJ ORGNS		GENL ED & RELTD		EDUC ADVOC ORGNS		OTHER REPTD ORGNS		ROW TOTALS	
Change	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
MOTIVATION	6	1.9	0	0	0	0	0	0	0	0	2	25.	1	2.5	9	3.7	0	0	18	2.9
DISCIPLINE/ MANAGEMENT	46	14.4	0	0	0	0	0	0	2	40.	0	0	5	12.5	40	16.5	0	0	93	15.
CURRICULUM DESIGN	74	23.1	0	0	0	0	0	0	1	20.	1	12.5	12	30.	64	26.3	1	33.3	153	24.7
TEACHING TECHNIQUES	82	25.6	0	0	0	0	1	100.	0	0	1	12.5	8	20.	55	22.6	2	66.7	149	24.
INSTRUCTIONAL GROUPING	11	3.4	0	0	0	0	0	0	0	0	0	0	0	0	9	3.7	0	0	20	3.2
TEACHING MATERIALS	15	4.7	0	0	0	0	0	0	1	20.	1	12.5	2	5.	10	4.2	0	0	29	4.7
TESTING/ EVALUATION	81	25.3	0	0	0	0	0	0	1	20.	2	25.	12	30.	55	22.6	0	0	151	24.4
PUBLIC INFO/ RELATIONS	5	1.6	0	0	0	0	0	0	0	0	1	12.5	0	0	1	.4	0	0	7	1.1
COLUMN TOTALS	320	100	0	0	0	0	0	100	5	100	8	100	40	100	243	100	3	100	620	100.0

Table 4.25 for English department head responses shows the membership product rankings as English, very high; educator advocacy, high; general education, low; science, social science, other curriculum, and other organizations, very low. Change product rankings show curriculum design, testing, and teaching techniques, high; discipline, medium; teaching materials, grouping, and motivation, low; public relations, very low.

Table 4.26

Frequency Index for MATHEMATICS Department Heads between Their Changes in Practice and Their Membership in Professional Associations (N=113)

Organizations	ENGL ORGNS	MATH ORGNS	PHYS EDUC ORGNS	SCI ORGNS	SOC SCI ORGNS	OTHER SUBJ ORGNS	GENL ED & RELTD	EDUC ADVOC ORGNS	OTHER REPTD ORGNS	ROW TOTALS
Change	n %	n %	n %	n %	n %	n %	n %	n %	n %	n %
MOTIVATION	0 0	4 1.8	0 0	0 0	0 0	0 0	0 0	1 .5	0 0	5 1.1
DISCIPLINE/ MANAGEMENT	1 50.	37 16.7	0 0	3 23.	0 0	1 25.	3 9.7	41 21.1	1 50.	87 18.5
CURRICULUM DESIGN	0 0	40 18.1	1 33.4	4 30.8	1 100.	1 25.	4 12.9	43 22.2	0 0	94 19.9
TEACHING TECHNIQUES	0 0	59 26.7	1 33.3	1 7.7	0 0	0 0	9 29.	46 23.7	1 50.	117 24.8
INSTRUCTIONAL GROUPING	0 0	11 5.	0 0	0 0	0 0	0 0	3 9.7	7 3.6	0 0	21 4.5
TEACHING MATERIALS	0 0	22 10.	0 0	4 30.8	0 0	1 25.	7 22.6	18 9.3	0 0	52 11.
TESTING/ EVALUATION	1 50.	48 21.7	1 33.3	1 7.7	0 0	1 25.	5 16.1	38 19.6	0 0	95 20.2
PUBLIC INFO/ RELATIONS	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
COLUMN TOTALS	2 100	221 100	3 100	13 100	1 100	4 100	31 100	194 100	2 100	471 100

Table 4.26 for mathematics department heads shows membership product rankings as mathematics and educator advocacy, very high; general education, low; all others, very low. Change product rankings show teaching techniques, high; testing, curriculum design, and discipline, medium; teaching materials, low; motivation, very low.

Table 4.27

Frequency Index for PHYSICAL EDUCATION Department Heads between Their Changes in Practice and Their Membership in Professional Associations (N=104)

Organizations	ENGL ORGNS		MATH ORGNS		PHYS EDUC ORGNS		SCI ORGNS		SOC SCI ORGNS		OTHER SUBJ ORGNS		GENL ED & RELTD		EDUC ADVOC ORGNS		OTHER REPTD ORGNS		ROW TOTALS	
Change	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
MOTIVATION	0	0	0	0	10	4.7	0	0	0	0	0	0	0	0	5	2.7	0	0	15	3.6
DISCIPLINE/ MANAGEMENT	0	0	0	0	42	19.8	0	0	0	0	1	10	3	42.8	44	24.	1	50	91	22.
CURRICULUM DESIGN	0	0	0	0	35	16.5	0	0	0	0	1	10	1	14.3	28	15.3	1	50	66	16.
TEACHING TECHNIQUES	0	0	0	0	43	20.3	0	0	0	0	5	50	2	28.6	36	19.7	0	0	86	20.7
INSTRUCTIONAL GROUPING	0	0	0	0	4	1.9	0	0	0	0	1	10	0	0	1	.6	0	0	6	1.4
TEACHING MATERIALS	0	0	0	0	42	19.8	0	0	0	0	2	20	0	0	36	19.7	0	0	80	19.3
TESTING/ EVALUATION	0	0	0	0	36	17.	0	0	0	0	0	0	1	14.3	33	18.	0	0	70	17.
PUBLIC INFO/ RELATIONS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
COLUMN TOTALS	0	0	0	0	212	100	0	0	0	0	10	100	7	100	183	100	2	100	414	100

Table 4.27 for physical education department heads shows membership product rankings as physical education, very high; educator advocacy, high; other curriculum, general education, and other organizations, very low. The change product rankings have discipline, teaching techniques, and teaching materials as high; testing and curriculum design as medium; motivation and grouping as very low.

Table 4.28

Frequency Index for SCIENCE Department Heads between Their Changes in Practice and Their Membership in Professional Associations (N=89)

Organizations	ENGL ORGNS		MATH ORGNS		PHYS EDUC ORGNS		SCI ORGNS		SOC SCI ORGNS		OTHER SUBJ ORGNS		GENL ED & RELTD		EDUC ADVOC ORGNS		OTHER REPTD ORGNS		ROW TOTALS	
Change	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
MOTIVATION	0	0	0	0	0	0	5	2.7	0	0	0	0	1	5.6	1	.6	0	0	7	1.8
DISCIPLINE/ MANAGEMENT	0	0	4	33.3	0	0	24	13.1	1	33.	0	0	5	27.7	32	19.3	1	50	67	17.3
CURRICULUM DESIGN	0	0	0	0	0	0	44	23.9	0	0	2	100	3	16.7	39	23.5	0	0	88	22.7
TEACHING TECHNIQUES	0	0	4	33.3	0	0	65	35.3	2	67.	0	0	6	33.3	60	36.1	0	0	137	35.4
INSTRUCTIONAL GROUPING	0	0	0	0	0	0	3	1.6	0	0	0	0	0	0	4	2.5	0	0	7	1.8
TEACHING MATERIALS	0	0	2	16.7	0	0	19	10.3	0	0	0	0	1	5.6	14	8.4	1	50	37	9.6
TESTING/ EVALUATION	0	0	2	16.7	0	0	24	13.1	0	0	0	0	2	11.1	16	9.6	0	0	44	11.4
PUBLIC INFO/ & RELATIONS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
COLUMN TOTALS	0	0	12	100	0	0	184	100	3	100	2	100	18	100	166	100	2	100	387	100

Table 4.28 for science department heads shows the membership product rankings as science and educator advocacy, high; general education and mathematics, low; and social science, other curriculum, and other organizations as very low. Change product rankings show teaching techniques, very high; curriculum design and discipline, high; testing and teaching materials, medium; and motivation, very low.

Table 4.29

Frequency Index for SOCIAL SCIENCE Department Heads between Their Changes in Practice and Their Membership in Professional Associations (N=94)

Organizations	ENGL ORGNS		MATH ORGNS		PHYS EDUC ORGNS		SCI ORGNS		SOC SCI ORGNS		OTHER SUBJ ORGNS		GENL ED & RELTD		EDUC ADVOC ORGNS		OTHER REPTD ORGNS		ROW TOTALS	
Change	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
MOTIVATION	0	0	0	0	0	0	0	0	2	1.5	0	0	3	12.5	6	3.1	0	0	11	3.1
DISCIPLINE/ MANAGEMENT	0	0	0	0	0	0	2	50	21	16.2	2	100	6	25.	34	17.6	0	0	65	18.1
CURRICULUM DESIGN	1	100	0	0	0	0	0	0	32	24.6	0	0	5	20.8	44	22.8	2	33.3	84	23.3
TEACHING TECHNIQUES	0	0	0	0	0	0	1	25.	24	18.5	0	0	2	8.3	23	11.9	2	33.3	52	14.4
INSTRUCTIONAL GROUPING	0	0	0	0	0	0	0	0	3	2.3	0	0	1	4.2	5	2.6	0	0	9	2.5
TEACHING MATERIALS	0	0	0	0	0	0	0	0	27	20.7	0	0	6	25.	43	22.3	2	33.4	78	21.7
TESTING/ EVALUATION	0	0	0	0	0	0	1	25.	21	16.2	0	0	1	4.2	38	19.7	0	0	61	16.9
PUBLIC INFO/ RELATIONS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
COLUMN TOTALS	1	100	0	0	0	0	4	100	130	100	2	100	24	100	193	100	6	100	360	100

Table 4.29 for social science department heads shows the membership product rankings as educator advocacy, very high; social science, high; general education, low; other organizations, science, other curriculum, and English, very low. Change product rankings show curriculum design and teaching materials as high; discipline, testing, and teaching techniques, medium; motivation and grouping, very low.

Table 4.30

Frequency Index for OTHER Department Heads between Their Changes in Practice and Their Membership in Professional Associations (N=13)

Organizations	ENGL ORGNS		MATH ORGNS		PHYS EDUC ORGNS		SCI ORGNS		SOC SCI ORGNS		OTHER SUBJ ORGNS		GENL ED & RELTD		EDUC ADVOC ORGNS		OTHER REPTD ORGNS		ROW TOTALS	
Change	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
MOTIVATION	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DISCIPLINE/ MANAGEMENT	0	0	0	0	0	0	0	0	0	0	3	21.4	1	16.7	3	15	0	0	7	17.1
CURRICULUM DESIGN	0	0	0	0	0	0	0	0	0	0	2	14.3	2	33.3	0	0	0	0	4	9.8
TEACHING TECHNIQUES	1	100	0	0	0	0	0	0	0	0	2	14.3	1	16.7	10	50	0	0	14	34.
INSTRUCTIONAL GROUPING	0	0	0	0	0	0	0	0	0	0	1	7.1	0	0	2	10	0	0	3	7.3
TEACHING MATERIALS	0	0	0	0	0	0	0	0	0	0	2	14.3	0	0	2	10	0	0	4	9.8
TESTING/ EVALUATION	0	0	0	0	0	0	0	0	0	0	4	28.6	2	33.3	3	15	0	0	9	22.
PUBLIC INFO/ RELATIONS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
COLUMN TOTALS	1	100	0	0	0	0	0	0	0	0	14	100	6	100	20	100	0	0	41	100

Table 4.30 for other department heads (the alternate subsample) shows the membership product rankings as very high in educator advocacy; other curriculum, high; general education, low; English, very low. Change product rankings show teaching techniques, high; testing and discipline, medium; teaching materials, curriculum design, and grouping, low.

Question 5: How Frequent among Department Heads Is the Sharing with Colleagues of Journal and Other Information about Classroom Practice?

Questionnaire items 88-107 elicited responses not only for the items listed on the instrument and shown as the first four entries of Table 4.31, but also for all items which respondents entered and then rated. Subsumed under "other" in Table 4.31 were a relatively few responses which appeared to fall into nine classes, some of which the respondents might have chosen to enter into one of the given categories (e.g., "convention notes" might have been marked under "circulated copies of other materials," but was not). The components of "other" included

1. Department meetings
2. Inservice programs of all kinds
3. Convention/conference notes
4. Observation of colleagues both at home and elsewhere
5. Television
6. Personal example, demonstration
7. Books
8. Feedback from students
9. Community, governmental, and other "outside" resources

Among the nine categories, "inservice programs" had a higher frequency of citation than did any other.

Tables 4.31 through 4.37 offer the data that answer the question, first for department heads as a group and then for each of the departments separately.

Table 4.31

Methods of Sharing Curriculum Information
Rated by ALL Department Heads (N=549)

Number and Percentage of Citations	VERY LOW		LOW		HIGH		VERY HIGH		ROW TOTALS	
	n	%	n	%	n	%	n	%	n	%
Modes										
CIRCULATED COPIES OF JOURNAL ARTICLES	140	48.3	210	30.9	144	17.6	23	6.1	517	23.8
CIRCULATED COPIES OF OTHER MATERIALS	40	13.7	185	27.2	244	29.7	53	14.	522	24.2
WORD-OF-MOUTH/ DISCUSSIONS	4	1.4	29	4.3	251	30.6	248	65.4	532	24.5
MEMORANDA	84	29.	199	29.3	169	20.6	45	11.9	497	22.9
OTHER	22	7.6	56	8.3	12	1.5	10	2.6	100	4.6
COLUMN TOTALS	290	100.	679	100.	820	100.	379	100.	2168	100.

Table 4.31 shows that department heads as a group find discussion to be the clearly-preferred mode of sharing information about their classroom practice. Ninety-six percent of the responses for the category "discussion" were high or very high.

The least-favored sharing mode was the category "circulated copies of journal articles." The category was rated low and very low by 79.2 percent of responses.

Table 4.32

Methods of Sharing Curriculum Information Rated by ENGLISH Department Heads (N=125)

Number and Percentage of Citations	VERY LOW		LOW		HIGH		VERY HIGH		ROW TOTALS	
	n	%	n	%	n	%	n	%	n	%
Modes										
CIRCULATED COPIES OF JOURNAL ARTICLES	29	48.2	49	31.	34	18.2	6	5.9	118	23.3
CIRCULATED COPIES OF OTHER MATERIALS	7	11.7	44	27.8	53	28.3	17	16.8	121	23.9
WORD-OF-MOUTH/ DISCUSSIONS	1	1.7	6	3.8	51	27.3	64	63.5	122	24.1
MEMORANDA	16	26.7	42	36.6	44	23.5	13	12.9	115	22.8
OTHER	7	11.7	17	10.8	5	2.7	1	.9	30	5.9
COLUMN TOTALS	60	100.	158	100.	187	100.	101	100.	506	100.

Table 4.33

Methods of Sharing Curriculum Information Rated by MATHEMATICS Department Heads (N=113)

Number and Percentage of Citations	VERY LOW		LOW		HIGH		VERY HIGH		ROW TOTALS	
	n	%	n	%	n	%	n	%	n	%
Modes										
CIRCULATED COPIES OF JOURNAL ARTICLES	30	46.2	45	30.	30	18.1	4	5.6	109	24.1
CIRCULATED COPIES OF OTHER MATERIALS	11	16.9	47	31.3	44	26.5	6	8.2	108	23.8
WORD-OF-MOUTH/ DISCUSSIONS	1	1.5	5	3.3	55	33.1	49	68.1	110	24.3
MEMORANDA	18	27.7	24	28.	35	21.1	9	12.5	104	23.
OTHER	5	7.7	11	7.4	2	1.2	4	5.6	22	4.8
COLUMN TOTALS	65	100.	150	100.	166	100.	72	100.	453	100.

Table 4.34

Methods of Sharing Curriculum Information Rated by PHYSICAL EDUCATION Department Heads (N=104)

Number and Percentage of Citations	VERY LOW		LOW		HIGH		VERY HIGH		ROW TOTALS	
	n	%	n	%	n	%	n	%	n	%
Modes										
CIRCULATED COPIES OF JOURNAL ARTICLES	26	55.3	37	29.8	34	19.3	3	4.9	100	24.4
CIRCULATED COPIES OF OTHER MATERIALS	5	10.6	35	28.2	50	28.4	11	18.1	101	24.8
WORD-OF-MOUTH/ DISCUSSIONS	1	2.1	9	7.3	55	31.3	36	59.1	101	24.8
MEMORANDA	12	25.6	37	29.8	36	20.5	10	16.2	95	23.3
OTHER	3	6.4	6	4.9	1	.5	1	1.7	11	2.7
COLUMN TOTALS	47	100.	124	100.	176	100.	61	100.	408	100.

Table 4.35

Methods of Sharing Curriculum Information Rated by SCIENCE Department Heads (N=89)

Number and Percentage of Citations	VERY LOW		LOW		HIGH		VERY HIGH		ROW TOTALS	
	n	%	n	%	n	%	n	%	n	%
Modes										
CIRCULATED COPIES OF JOURNAL ARTICLES	18	37.5	36	30.5	28	20.7	5	7.9	87	23.9
CIRCULATED COPIES OF OTHER MATERIALS	10	20.8	27	22.9	44	32.6	6	9.5	87	23.9
WORD-OF-MOUTH/ DISCUSSIONS	1	2.1	3	2.5	40	29.6	44	69.8	88	34.2
MEMORANDA	17	35.4	40	33.9	21	15.6	5	7.9	83	22.8
OTHER	2	4.2	12	10.2	2	1.5	3	4.9	19	5.2
COLUMN TOTALS	48	100.	118	100.	135	100.	63	100.	364	100.

Table 4.36

Methods of Sharing Curriculum Information Rated by SOCIAL SCIENCE Department Heads (N=94)

Number and Percentage of Citations	VERY LOW		LOW		HIGH		VERY HIGH		ROW TOTALS	
Modes	n	%	n	%	n	%	n	%	n	%
CIRCULATED COPIES OF JOURNAL ARTICLES	35	53.8	37	34.3	14	10.4	4	5.6	90	23.7
CIRCULATED COPIES OF OTHER MATERIALS	6	9.2	25	23.1	49	36.6	12	16.7	92	24.3
WORD-OF-MOUTH/ DISCUSSIONS	0	0	5	4.6	40	29.9	49	68.1	94	24.8
MEMORANDA	19	29.2	31	28.7	30	22.4	6	8.2	86	22.7
OTHER	5	7.8	10	9.3	1	.7	1	1.4	17	4.5
COLUMN TOTALS	65	100	108	100.	134	100.	72	100.	379	100.

Table 4.37

Methods of Sharing Curriculum Information Rated by OTHER Department Heads (N=13)

Number and Percentage of Citations	VERY LOW		LOW		HIGH		VERY HIGH		ROW TOTALS	
Modes	n	%	n	%	n	%	n	%	n	%
CIRCULATED COPIES OF JOURNAL ARTICLES	2	40.	6	30.	4	23.5	1	10.	13	25.
CIRCULATED COPIES OF OTHER MATERIALS	1	20.	7	35.	4	23.5	1	10.	13	25.
WORD-OF-MOUTH/ DISCUSSIONS	0	0	1	5.	5	29.5	6	60.	12	23.1
MEMORANDA	2	40.	6	30.	3	17.6	2	20.	13	25.
OTHER	0	0	0	0	1	5.9	0	0	1	1.9
COLUMN TOTALS	5	100.	20	100.	17	100.	10	100.	52	100.

Analysis of the percentage of combined highs and combined lows for Tables 4.32 through 4.37 demonstrates that the opinions of the heads of the various departments vary little from the tendency illustrated in Table 4.31. For the purpose of sharing information with colleagues, department heads rated the following methods lowest and highest:

	Lowest		Highest	
English	Articles	79.2 %	Discussion	87.6 %
Math	Articles	76.2	Discussion	100.
P.E.	Articles	85.1	Discussion	90.4
Science	Memoranda	69.3	Discussion	99.4
Soc. Sci.	Articles	88.1	Discussion	98.0
Others	Articles Memoranda	70.0 70.0	Discussion	89.5

All department heads found discussion to be of greatest value in sharing curriculum information with colleagues. Journal article circulation rated lowest in the estimate of all department heads but those of science. Social science departments heads, followed closely by physical education heads, were less enthusiastic than any in their opinion of the efficacy of circulating journal articles.

Question 6: Is There a Complex of Professional and Personal Characteristics That Appears to Typify the Department Heads Who Report Journal-Influenced Change in Their Classroom Practice?

Tables 4.38 through 4.62 present the data that may enable characterization of department heads who reported that their classroom practice had been influenced by journals.

Table 4.38

School Population Strata of Department Heads Who Reported Journal-Influenced Change (N=115)

		ALL DEPTMTS (N=115)		ENGLISH (n=29)		MATH (n=22)		PHYSICAL EDUC (n=23)		SCIENCE (n=21)		SOCIAL SCIENCE (n=16)		OTHER DEPTS (n=4)	
		n	%	n	%	n	%	n	%	n	%	n	%	n	%
STRATA	1	1	.9	0	0	0	0	1	4.3	0	0	0	0	0	0
	2	2	1.7	0	0	1	4.5	0	0	1	4.8	0	0	0	0
	3	4	3.5	0	0	1	4.5	1	4.3	0	0	1	6.3	1	25.
	4	4	3.5	1	3.4	1	4.5	1	4.3	1	4.8	0	0	0	0
	5	4	3.5	1	3.4	1	4.5	0	0	1	4.8	1	6.3	0	0
	6	10	8.7	3	10.3	1	4.5	3	13.	2	9.5	1	6.3	0	0
	7	13	11.3	4	13.8	2	9.1	2	8.7	3	14.3	2	12.5	0	0
	8	14	12.2	5	17.2	1	4.5	4	17.4	2	9.5	1	6.3	1	25.
	9	12	10.4	5	17.2	2	9.1	0	0	3	14.3	2	12.5	0	0
	10	18	15.7	5	17.2	5	22.7	3	13.	2	9.5	3	18.8	0	0
	11	10	8.7	1	3.4	3	13.6	2	8.7	2	9.5	1	6.3	1	25.
	12	8	7.	1	3.4	1	4.5	3	13.	1	4.8	2	12.5	0	0
	13	6	5.2	2	6.9	2	9.1	1	4.3	0	0	1	6.3	0	0
	14	1	.9	0	0	0	0	0	0	1	4.8	0	0	0	0
	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	16	8	7.	1	3.4	1	4.5	2	8.7	2	9.5	1	6.3	1	25.
COLUMN TOTALS		115	100.	29	100.	22	100.	23	100.	21	100.	16	100.	4	100.

Table 4.39

Subject Area Leadership Responsibility of Department Heads Who Reported Journal-Influenced Change (N=115)

	ALL DEPTMTS (N-115)		ENGLISH (n=29)		MATH (n=22)		PHYSICAL EDUC (n=23)		SCIENCE (n=21)		SOCIAL SCIENCE (n=16)		OTHER DEPTS (n=4)	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
LEADERSHIP AREA	115	100.	29	25.2	22	19.1	23	20.	21	18.3	16	13.9	4	3.5

Tables 4.38 and 4.39 show that the journal-influenced department heads as a group corresponded proportionally in school population strata and leadership responsibility with the department heads of the total sample.

Table 4.40

Gender of Department Heads Who Reported Journal-Influenced Change (N=115)

	ALL DEPTMTS (N-115)		ENGLISH (n=29)		MATH (n=22)		PHYSICAL EDUC (n=23)		SCIENCE (n=21)		SOCIAL SCIENCE (n=16)		OTHER DEPTS (n=4)	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
FEMALE	41	36.3	16	55.2	3	14.3	11	50.	4	19.	5	31.3	2	50.
MALE	72	63.7	13	44.8	18	85.7	11	50.	17	81.	11	68.8	2	50.
COLUMN TOTALS	113	100.	29	100.	21	100.	22	100.	21	100.	16	100.	4	100.

Table 4.40 reveals that journal-influenced department heads included a proportion of women somewhat greater than represented in the total sample. English and physical education women department heads were especially well represented.

Table 4.41

Length of Leadership Service of Department Heads Who Reported Journal-Influenced Change (N=115)

	ALL DEPTMTS (N-115)		ENGLISH (n=29)		MATH (n=22)		PHYSICAL EDUC (n=23)		SCIENCE (n=21)		SOCIAL SCIENCE (n=16)		OTHER DEPTS (n=4)	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
1- 5 YEARS	46	40.	15	53.6	9	40.9	7	30.4	8	38.1	6	37.5	1	25.
6-10 YEARS	26	22.6	6	21.4	7	31.8	2	8.7	5	23.8	4	25.	2	50.
11-15 YEARS	20	17.4	4	14.3	4	18.2	5	21.7	2	9.5	5	31.3	0	0
16+ YEARS	22	19.1	3	10.7	2	9.1	9	39.1	6	28.6	1	6.3	1	25.
COLUMN TOTALS	114	100.	28	100.	22	100.	23	100.	21	100.	16	100.	4	100.

Table 4.41 discloses that on the average there was little difference in length of leadership service between journal-influenced department heads and those of the total sample. Among physical education department heads, however, journal-influenced heads with service of 11-plus years at 60.8 percent contrasted with the total physical education group with 11-plus years at 44.2 percent. Among the departments other than the named groups, 75 percent of the heads showing journal-influenced change reported service at 1-10 years.

Table 4.42

School Setting of Department Heads Who Reported Journal-Influenced Change (N=115)

	ALL DEPTMTS (N-115)		ENGLISH (n=29)		MATH (n=22)		PHYSICAL EDUC (n=23)		SCIENCE (n=21)		SOCIAL SCIENCE (n=16)		OTHER DEPTS (n=4)	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
URBAN	16	14.4	4	15.4	0	0	6	27.3	2	9.5	4	25.	0	0
SUBURBAN	68	61.3	17	65.4	15	68.2	9	40.9	13	61.9	12	75.	2	50.
RURAL	27	24.3	5	19.2	7	31.8	7	31.8	6	28.6	0	0	2	50.
COLUMN TOTALS	111	100.	26	100.	22	100.	22	100.	21	100.	16	100.	4	100.

Table 4.42 shows that much of the journal-influenced change among department heads is carried on in suburban schools. Five of the six leadership areas show the largest percentage in suburban locations. Except for physical education heads, the suburban location was more frequently reported for department heads whose practice was affected by journals than for the department heads of the sample itself. Except for science and alternate department heads, fewer

journal-influenced leaders were located in rural schools than were the department heads of the total sample. No social science heads from rural settings were present in the journal-influenced group.

Table 4.43

School Enrollment Status of Department Heads Who Reported Journal-Influenced Change (N=-15)

	ALL DEPTMTS (N-115)		ENGLISH (n=29)		MATH (n=22)		PHYSICAL EDUC (n=23)		SCIENCE (n=21)		SOCIAL SCIENCE (n=16)		OTHER DEPTS (n=4)	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
DECLINING	55	49.1	12	44.4	11	50.	10	45.5	7	33.3	12	75.	3	75.
STABLE	34	30.4	8	29.6	5	22.7	8	36.4	11	52.4	1	6.3	1	25.
INCREASING	23	20.5	7	25.9	6	27.3	4	18.2	3	14.3	3	18.8	0	0
COLUMN TOTALS	112	100.	27	100.	22	100.	22	100.	21	100.	16	100.	4	100.

Table 4.43 reveals that on the average and except for science department heads, the category with the largest percentage of journal-influenced department leaders was that for the schools of declining enrollment. The majority of journal-influenced science department heads were leaders in schools of stable enrollment.

Table 4.44

Self-Assessed Innovativeness of Department Heads
Who Reported Journal-Influenced Change (N=115)

	ALL DEPTMTS (N-115)		ENGLISH (n=29)		MATH (n=22)		PHYSICAL EDUC (n=23)		SCIENCE (n=21)		SOCIAL SCIENCE (n=16)		OTHER DEPTS (n=4)	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
POOR	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FAIR	10	8.9	3	10.7	4	19.	2	8.7	0	0	1	6.3	0	0
GOOD	72	64.3	20	71.4	13	61.9	14	60.9	13	65.	10	62.5	2	50.
EXCELLENT	30	26.8	5	17.9	4	19.	7	30.4	7	35.	5	31.3	2	50.
COLUMN TOTALS	112	100.	28	100.	21	100.	23	100.	20	100.	16	100.	4	100.

Table 4.44 shows journal-influenced department heads assessing their own innovativeness and professional currency as good to excellent. Their self-assessment was rivaled only by the department heads of the alternate subsample. The journal-influenced social science and physical education heads also rated themselves high in this area. The other journal-influenced department heads' self-assessments of innovativeness and professional currency were within a range of 10 percentage points of the highest group. Most department heads rated themselves as "good," rather than as "excellent."

H_{o1} that follows below hypothesized that "department heads across all subject areas will reveal no differences as to their self-estimate of the degree to which they have continued to keep up with innovation and the growth of knowledge in their fields." The hypothesis was tested for the entire sample and is presented here in order to provide comparison data.

Table 4.45

Summary for the Analysis of Variance for All Departments for Self-Assessed Innovation and Professional Growth

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Squares	F-Ratio
Between Groups	5	4.2844	0.8569	1.908*
Within Groups	521	233.9433	0.4490	
TOTAL	526	238.2277		

Source: Questionnaire Items 30-33: "I rate my performance within the last two years in keeping up with innovation and the growth of knowledge in my field as (poor, fair, good, excellent)."

*F-probability= 0.913, p>.05

The hypothesis was accepted. The F-ratio demonstrated that there were no statistically significant differences between groups at $\alpha = .05$.

Table 4.46

Whether Department Heads Who Reported Journal-Influenced Change Had Designed New Courses or Units (N=115)

	ALL DEPTMTS (N-115)		ENGLISH (n=29)		MATH (n=22)		PHYSICAL EDUC (n=23)		SCIENCE (n=21)		SOCIAL SCIENCE (n=16)		OTHER DEPTS (n=4)	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
YES	98	87.5	25	89.3	20	90.9	18	81.8	17	85.	16	100.	2	50.
NO	14	12.5	3	10.7	2	9.1	4	18.2	2	15.	0	0	2	50.
COLUMN TOTALS	112	100.	28	100.	22	100.	22	100.	19	100.	16	100.	4	100.

Table 4.46 discloses that journal-influenced leaders reported a very high percentage had designed new courses or classroom units within the last two years. All the social science heads reported such activity. Physical education heads reported somewhat less such change than did all but the journal-influenced members of the alternate subsample.

Table 4.47

Whether Department Heads Who Reported Journal-Influenced Change Had Supervised Beginning/Student Teachers (N=115)

	ALL DEPTMTS (N-115)		ENGLISH (n=29)		MATH (n=22)		PHYSICAL EDUC (n=23)		SCIENCE (n=21)		SOCIAL SCIENCE (n=16)		OTHER DEPTS (n=4)	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
YES	65	61.3	18	66.7	11	52.4	14	70.	9	50.	12	75.	1	25.
NO	41	38.7	9	33.3	10	47.6	6	30.	9	50.	4	25.	3	75.
COLUMN TOTALS	106	100.	27	100.	21	100.	20	100.	18	100.	16	100.	4	100.

Table 4.47 reveals that nearly two-thirds of the journal-influenced department heads supervised a student teacher or a beginning teacher during the last two years and

thus had additional indirect influence on potential change. Journal-influenced social science department heads reported the most such supervision, with 75 percent responding affirmatively. Lowest were science and mathematics heads. The percentage range of affirmative responses was 50 to 75 percent. Members of the alternate subsample reported that 50 percent were involved in such supervision activities.

Table 4.48

Self-Assessed Reading Ability of Department Heads Who Reported Journal-Influenced Change (N=115)

	ALL DEPTMTS (N-115)		ENGLISH (n=29)		MATH (n=22)		PHYSICAL EDUC (n=23)		SCIENCE (n=21)		SOCIAL SCIENCE (n=16)		OTHER DEPTS (n=4)	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
POOR	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FAIR	4	3.5	0	0	1	4.5	2	8.7	0	0	0	0	1	25.
GOOD	41	36.	9	32.1	8	36.4	11	47.8	9	42.9	4	25.	0	0
EXCELLENT	69	60.5	19	67.9	13	59.1	10	43.5	12	57.1	12	75.	3	75.
COLUMN TOTALS	114	100.	28	100.	22	100.	23	100.	21	100.	16	100.	4	100.

Table 4.48 shows that journal-influenced department heads had a good-to-excellent opinion of their own reading ability. Social science and English heads expressed the highest percentage of "excellent" ratings. Physical education and mathematics department heads expressed small percentages of "fair" self-estimates.

H_{o2} that follows hypothesized that "department heads across all subject areas will reveal no differences as to their self-assessment of the relative quality of their reading ability." The hypothesis was tested for the entire sample and is presented here in order to provide comparison data.

Table 4.49

Summary for the Analysis of Variance for All Departments for Self-Assessed Reading Ability

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Squares	F-Ratio
Between Groups	5	15.1129	3.0226	7.187*
Within Groups	528	222.0706	0.4206	
TOTAL	533	237.1835		

Source: Questionnaire Items 48-51: "I consider my own reading ability to be (poor, fair, good, excellent)."

*F-probability = 0.0000, $p<.05$

The hypothesis was rejected. The F-ratio revealed significant difference between groups at $\alpha = .05$. Employment of the Modified Least Significant Difference procedure at $\alpha = .05$ compared group means and produced the following results: Social science department heads ($\bar{X} = 3.6022$) and English department heads ($\bar{X} = 3.6911$) were approximately equal in their self-assessment and were different from and superior in self-assessed reading ability to physical education department heads ($\bar{X} = 3.2596$) and mathematics department heads ($\bar{X} = 3.3125$).

Table 4.50

Whether Department Heads Who Reported Journal-Influenced Change Had Initiated Classroom Changes (N=113)

	ALL DEPTMTS (N-115)		ENGLISH (n=29)		MATH (n=22)		PHYSICAL EDUC (n=23)		SCIENCE (n=21)		SOCIAL SCIENCE (n=16)		OTHER DEPTS (n=4)	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
YES	110	99.1	28	100.	21	100.	22	100.	20	100.	16	100.	3	75.
NO	1	.9	0	0	0	0	0	0	0	0	0	0	1	25.
COLUMN TOTALS	111	100.	28	100.	21	100.	22	100.	20	100.	16	100.	4	100.

Table 4.50 shows that virtually all the journal-influenced department heads initiated one or more changes in their practice within the past two years. Of the four members of the alternate subsample, one reported making no such changes.

H_{o3} that follows below hypothesized that "department heads across all subject-matter areas will reveal no differences as to whether or not they have initiated one or more innovations in their own classroom practice." The hypothesis was tested for the entire sample, and its analysis is presented here in order to provide comparison data.

Table 4.51

Summary for the Analysis of Variance for All Departments for Initiation of Change in Classroom Practice

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Squares	F-Ratio
Between Groups	5	0.3096	0.0619	1.149*
Within Groups	519	27.9761	0.0539	
TOTAL	524	28.2857		

Source: Questionnaire Items 38-39: "Within the last two years I have initiated one or more innovations or changes in my own classroom practice (yes, no)."

*F-probability = 0.3335, p>.05

The hypothesis was accepted. The obtained F-ratio showed that there were no statistically significant differences among the departments. Total group mean was 1.0571 ("yes"). Mean range extended from 1.0244 to 1.0957. On the average, department heads across all departments within the two years prior to responding to the questionnaire reported initiating one or more innovations or changes in their own classroom practice.

Table 4.52

Self-Assessed Journal Use of Department Heads Who Reported Journal-Influenced Changes (N=115)

	ALL DEPTMTS (N-115)		ENGLISH (n=29)		MATH (n=22)		PHYSICAL EDUC (n=23)		SCIENCE (n=21)		SOCIAL SCIENCE (n=16)		OTHER DEPTS (n=4)	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
VERY LOW	12	10.4	4	13.8	0	0	3	13.	1	4.8	2	12.5	0	0
LOW	50	43.5	14	48.3	2	9.1	9	39.1	6	28.6	7	43.8	4	100.
VERY HIGH	46	40.	8	27.6	10	45.5	10	43.5	13	61.9	5	31.3	0	0
HIGH	7	6.1	3	10.3	10	45.5	1	4.3	1	4.8	2	12.5	0	0
COLUMN TOTALS	115	100.	29	100.	22	100.	23	100.	21	100.	16	100.	4	100.

Table 4.52 shows that journal-influenced mathematics and science department heads assessed their own use of journals as higher than others. English and social studies heads assessed their own use of journals as relatively lower than the others. All the members of the alternate subsample rated their journal use as low.

Table 4.53

Changes in Their Own Practice Identified by Department Heads Who Reported Journal-Influenced Change (N=115)

	ALL DEPTMTS (N=115)		ENGLISH (n=29)		MATH (n=22)		PHYSICAL EDUC (n=23)		SCIENCE (n=21)		SOCIAL SCIENCE (n=16)		OTHER DEPTS (n=4)	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
MOTIVATION	12	4.2	1	1.3	4	7.4	4	6.5	0	0	3	7.	0	0
DISCIPLINE	36	12.6	8	10.7	5	9.3	11	17.7	4	8.9	7	16.2	1	16.7
CURRIC. DESIGN	74	26	16	21.3	14	26.	14	22.6	17	37.8	12	28.	1	16.7
TCHG. TECHN.	67	23.5	19	25.3	15	27.7	12	19.4	14	31.1	5	11.6	2	33.2
GROUPING	9	3.2	3	4.	1	1.8	3	4.8	0	0	2	4.7	0	0
MATERIALS	35	12.3	5	6.7	6	11.1	9	14.5	5	11.1	9	20.9	1	16.7
TESTING	50	17.5	21	28.	9	16.7	9	14.5	5	11.1	5	11.6	1	16.7
PUBLIC INFO.	2	.7	2	2.7	0	0	0	0	0	0	0	0	0	0
COLUMN TOTALS	285	100.	75	100.	54	100.	62	100.	45	100.	43	100.	6	100.

Table 4.53 shows that the journal-influenced heads effected much of their classroom change in the areas of curriculum design and in teaching techniques. Changes in discipline/classroom management and in testing and evaluation were less prominently mentioned. Science heads concentrated most of their changes in the areas of curriculum design and teaching technique, whereas other departments indicated changes in a variety of areas.

Table 4.54

Sources of Change Identified by Department Heads Who Reported Journal-Influenced Change (N=115)

	ALL DEPTMTS (N-115)		ENGLISH (n=29)		MATH (n=22)		PHYSICAL EDUC (n=23)		SCIENCE (n=21)		SOCIAL SCIENCE (n=16)		OTHER DEPTS (n=4)	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
ENGLISH J's.	21	7.5	20	26.9	0	0	0	0	0	0	1	2.5	0	0
MATH J's.	18	6.5	0	0	18	33.3	0	0	0	0	0	0	0	0
PHYS. ED. J's.	28	10.	1	1.4	1	1.9	24	39.3	1	2.3	0	0	1	16.7
SCIENCE J's.	46	16.5	7	9.4	9	16.7	1	1.6	26	59.1	2	5.	1	16.7
SOCIAL SCI. J's.	13	4.7	1	1.4	1	1.9	0	0	0	0	11	27.5	0	0
OTHER CURRIC.J's.	1	.4	1	1.4	0	0	0	0	0	0	0	0	0	0
GENERAL ED. J's.	36	12.9	10	13.5	4	7.3	10	16.5	4	9.1	6	15.	2	33.2
GEN'L.INTRST.J's.	4	1.4	1	1.4	1	1.9	1	1.6	0	0	1	2.5	0	0
OTHER LIT/MEDIA	6	2.2	1	1.4	0	0	0	0	3	6.8	2	5.	0	0
CONSULTANTS	5	1.8	1	1.4	1	1.9	0	0	1	2.3	1	2.5	1	16.7
PROFSSNL. ASSNS.	11	3.9	3	4.1	1	1.9	1	1.6	3	6.8	3	7.5	0	0
COLLEAGUES/STDTS.	50	17.8	10	13.5	14	25.9	13	21.3	5	11.3	8	20.	0	0
PROFSNLS.ELSWHR.	8	2.9	6	8.1	0	0	1	1.6	1	2.3	0	0	0	0
ON-SITE INSVC.	32	11.5	12	16.1	4	7.3	10	16.5	0	0	5	12.5	1	16.7
COLUMN TOTALS	279	100.	74	100.	54	100.	61	100.	44	100.	40	100.	6	100.

Table 4.54 shows that the journal-influenced department heads identified their subject area journals as the chief sources of their classroom changes. The next most important source among the many cited were the colleagues and students of the department heads. Then followed in importance the journals of general education and on-site inservice experiences.

Table 4.55

Journals Having Direct, Practical Value Identified by
Department Heads Who Reported
Journal-Influenced Change
(N=115)

	ALL DEPTMTS (N-115)		ENGLISH (n=29)		MATH (n=22)		PHYSICAL EDUC (n=23)		SCIENCE (n=21)		SOCIAL SCIENCE (n=16)		OTHER DEPTS (n=4)	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
ENGLISH	43	16.	42	70.	0	0	0	0	0	0	1	3.6	0	0
MATHEMATICS	32	11.9	0	0	32	66.7	0	0	0	0	0	0	0	0
PHYSICAL EDUC.	52	19.4	0	0	0	0	52	81.3	0	0	0	0	0	0
SCIENCE	57	21.3	1	1.7	2	4.1	0	0	53	88.3	0	0	1	12.5
SOCIAL SCIENCE	20	7.5	3	5.	0	0	0	0	1	1.7	16	57.1	0	0
OTHER SUBJECTS	6	2.2	1	1.7	0	0	0	0	1	1.7	0	0	4	50.
GENERAL EDUC.	53	19.8	13	21.6	13	27.1	10	15.6	4	6.7	10	35.6	3	37.5
GEN'L. INTEREST	5	1.9	0	0	1	2.1	2	3.1	1	1.7	1	3.6	0	0
COLUMN TOTALS	268	100.	60	100.	48	100.	64	100.	60	100.	28	100.	8	100.

Table 4.55 reveals that the journals having direct, practical value to the journal-influenced department heads were their subject-area journals. Of secondary importance were the journals of general education. Other journals were mentioned infrequently.

Table 4.56

Journals Having Indirect Value Identified by Department Heads Who Reported Journal-Influenced Change (N=115)

	ALL DEPTMTS (N-115)		ENGLISH (n=29)		MATH (n=22)		PHYSICAL EDUC (n=23)		SCIENCE (n=21)		SOCIAL SCIENCE (n=16)		OTHER DEPTS (n=4)	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
ENGLISH	8	6.	8	34.8	0	0	0	0	0	0	0	0	0	0
MATHEMATICS	4	3.	0	0	4	16.	0	0	0	0	0	0	0	0
PHYSICAL EDUC.	12	9.	0	0	1	4.	11	32.4	0	0	0	0	0	0
SCIENCE	31	23.1	1	4.3	6	24.	0	0	24	68.6	0	0	0	0
SOCIAL SCIENCE	5	3.7	0	0	1	4.	2	5.9	0	0	2	13.3	0	0
OTHER SUBJECTS	2	1.5	0	0	0	0	1	2.9	0	0	0	0	1	50.
GENERAL EDUC.	65	48.5	14	60.9	12	48.	17	50.	9	25.7	12	80.	1	50.
GEN'L. INTEREST	7	5.2	0	0	1	4.	3	8.8	2	5.7	1	6.7	0	0
COLUMN TOTALS	134	100.	23	100.	25	100.	34	100.	35	100.	15	100.	2	100.

Table 4.56 shows that the journals of general education were for the most part the journals having indirect value to the journal-influenced department heads. Science heads reported some of their own subject area journals as having most of the indirect value for them. The general interest journals represented a distant third in ranking in most cases.

Table 4.57

Professional Association Memberships of Department Heads Who Reported Journal-Influenced Change (N=115)

	ALL DEPTMTS (N-115)		ENGLISH (n=29)		MATH (n=22)		PHYSICAL EDUC (n=23)		SCIENCE (n=21)		SOCIAL SCIENCE (n=16)		OTHER DEPTS (n=4)	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
ENGLISH	41	12.9	40	48.2	0	0	0	0	0	0	0	0	1	11.1
MATHEMATICS	31	9.8	0	0	31	51.6	0	0	0	0	0	0	0	0
PHYSICAL EDUC.	34	10.7	0	0	1	1.7	33	56.9	0	0	0	0	0	0
SCIENCE	37	11.7	0	0	1	1.7	0	0	37	57.8	0	0	0	0
SOCIAL SCIENCE	18	5.7	2	2.4	0	0	0	0	0	0	16	36.4	0	0
OTHER SUBJECTS	7	2.2	1	1.2	0	0	1	1.7	0	0	0	0	5	55.6
GENERAL EDUC.	18	5.7	5	6.	3	5.	1	1.7	3	4.7	4	9.	2	22.2
EDUCATOR ADVOC.	129	40.7	34	41.	24	40.	23	39.7	23	35.9	24	54.6	1	11.1
OTHER ORGNZNS.	2	.6	1	1.2	0	0	0	0	1	1.6	0	0	0	0
COLUMN TOTALS	317	100.	83	100.	60	100.	58	100.	64	100.	44	100.	9	100.
MEANS	2.757		2.862		2.727		2.522		3.048		2.750		2.250	

Table 4.57 shows that in all but one area, the subject area professional organization predominated for each department. The exception was social science whose major professional group was that representing the educator advocacy organizations. With that exception, the subject area department heads named the educator advocacy group as their second-most frequent membership. Science heads amassed the greatest mean number of professional associations. Department heads of the alternate subsample identified the organizations representing other subjects as their major professional association memberships, with general education organizations as their second-most frequent membership group.

Table 4.58

Opinion of Article Circulation as Information-Sharing Mode by Department Heads Who Reported Journal-Influenced Change (N=115)

	ALL DEPTMTS (N-115)		ENGLISH (n=29)		MATH (n=22)		PHYSICAL EDUC (n=23)		SCIENCE (n=21)		SOCIAL SCIENCE (n=16)		OTHER DEPTS (n=4)	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
VERY LOW	17	15.2	5	17.9	5	22.7	2	9.5	1	4.8	4	25.	0	0
LOW	41	36.6	9	32.1	8	36.4	5	23.8	9	42.9	7	43.8	3	75.
HIGH	44	39.3	13	46.4	8	36.4	11	52.4	8	38.1	3	18.8	1	25.
VERY HIGH	10	8.9	1	3.6	1	4.5	3	14.3	3	14.3	2	12.5	0	0
COLUMN TOTALS	112	100.	28	100.	22	100.	21	100.	21	100.	16	100.	4	100.

Table 4.58 identifies only physical education and science leaders as those journal-influenced department heads who rated high the circulation of journal articles as a means of sharing curriculum information with colleagues.

Table 4.59

Opinion of Other Materials Circulation as Information-Sharing by Department Heads Who Reported Journal-Influenced Change (N=115)

	ALL DEPTMTS (N-115)		ENGLISH (n=29)		MATH (n=22)		PHYSICAL EDUC (n=23)		SCIENCE (n=21)		SOCIAL SCIENCE (n=16)		OTHER DEPTS (n=4)	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
VERY LOW	2	1.8	0	0	1	4.5	0	0	1	4.8	0	0	0	0
LOW	32	28.1	8	27.6	2	27.3	5	22.7	2	19.	6	37.5	3	75.
HIGH	67	58.8	18	62.1	15	68.2	12	54.5	15	71.4	6	37.5	1	25.
VERY HIGH	13	11.4	3	10,3	0	0	5	22.7	1	4.8	4	25.	0	0
COLUMN TOTALS	114	100.	29	100.	22	100.	22	100.	21	100.	16	100.	4	100.

Table 4.59 shows journal-influenced physical education, science, and English, and social science department heads

favoring the circulation of other materials as an effective means of sharing curriculum information with colleagues.

Table 4.60

Opinion of Discussion as Information-Sharing Mode by Department Heads Who Reported Journal-Influenced Change (N=115)

	ALL DEPTMTS (N-115)		ENGLISH (n=29)		MATH (n=22)		PHYSICAL EDUC (n=23)		SCIENCE (n=21)		SOCIAL SCIENCE (n=16)		OTHER DEPTS (n=4)	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
VERY LOW	2	1.8	1	3.6	0	0	0	0	1	4.8	2	14.3	0	0
LOW	10	8.8	2	7.1	2	9.1	2	9.1	2	9.5	4	28.6	1	25.
HIGH	42	37.2	7	25.	9	40.9	11	50.	10	47.6	6	42.9	2	50.
VERY HIGH	59	52.2	18	64.3	11	50.	4	40.9	8	38.1	2	14.3	1	25.
COLUMN TOTALS	113	100.	28	100.	22	100.	22	100.	21	100.	16	100.	4	100.

Table 4.60 reveals that most journal-influenced department heads rated discussion high as a means of sharing curriculum information with colleagues.

Table 4.61

Opinion of Circulated Memoranda as Information-Sharing Mode by Department Heads Who Reported Journal-Influenced Change (N=115)

	ALL DEPTMTS (N-115)		ENGLISH (n=29)		MATH (n=22)		PHYSICAL EDUC (n=23)		SCIENCE (n=21)		SOCIAL SCIENCE (n=16)		OTHER DEPTS (n=4)	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
VERY LOW	13	12.5	4	14.8	3	13.6	1	5.3	2	11.1	1	25.	1	25.
LOW	39	37.5	6	22.2	9	40.9	8	42.1	10	55.6	2	50.	2	50.
HIGH	41	39.4	14	51.9	8	36.4	8	42.1	5	27.8	0	0	0	0
VERY HIGH	11	10.6	3	11.1	2	9.1	2	10.5	4	5.6	1	25.	1	25.
COLUMN TOTALS	104	100.	27	100.	22	100.	19	100.	21	100.	4	100.	4	100.

Table 4.61 shows that only English and physical education journal-influenced department heads expressed even modest enthusiasm for the circulated memorandum as a means of sharing curriculum information with colleagues.

Table 4.62

Reasons for Reading Journals Given by Department Heads Who Reported Journal-Influenced Change (N=115)

	ALL DEPTMTS (N-115)		ENGLISH (n=29)		MATH (n=22)		PHYSICAL EDUC (n=23)		SCIENCE (n=21)		SOCIAL SCIENCE (n=16)		OTHER DEPTS (n=4)	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
WANT TO KEEP UP	32	23.4	8	22.9	6	27.4	7	21.9	8	33.3	3	16.6	0	0
WANT INFORMATION	11	8.	1	2.9	1	4.5	5	15.6	1	4.2	1	5.6	2	33.3
WANT ENRICHMENT	56	40.9	16	45.7	9	40.9	15	46.9	8	33.3	7	38.9	1	16.7
TITLE INTEREST	15	10.9	6	17.1	0	0	1	3.1	4	16.7	2	11.1	2	33.3
RECOMMENDED	1	.7	1	2.9	0	0	0	0	0	0	0	0	0	0
FOR ENJOYMENT	10	7.3	0	0	3	13.6	1	3.1	2	8.3	3	16.6	1	16.7
J's. AVAILABLE	5	3.6	2	5.6	1	4.5	1	3.1	1	4.2	0	0	0	0
HAVE THE TIME	3	2.2	1	2.9	1	4.5	0	0	0	0	1	5.6	0	0
DOING RESEARCH	4	3.	0	0	1	4.5	2	6.3	0	0	1	5.6	0	0
COLUMN TOTALS	137	100.	35	100.	22	100.	32	100.	24	100.	18	100.	6	100.

Table 4.62 discloses that journal-influenced department heads across all subject areas expressed two chief reasons for reading the journals: (1) they wanted enrichment of their subject-matter background, and (2) they wanted generally to keep professionally current. Other reasons given were related to the first two, e.g., they wanted information or enjoyment.

Directly related to Question 6 were the components of Hypothesis 4. The design for the study called for testing the hypotheses against data from the population of department heads whose practice had been affected by journals. This population might have included each of the 1,264 members of the sample. In fact, that subgroup totaled but 115 department heads separated into six departmental subsets. Cell sizes for the department populations did not prove adequate to accommodate statistical analysis; that is, some cells were entirely without responses. Following are stated the components and the analysis outcomes for each.

H_{o4A}: "Department heads across all subject matter areas who report journal affected change in classroom practice will reveal no differences as to their self assessed performance in keeping up with innovation and curriculum knowledge." The data were insufficient to test the hypothesis.

H_{o4B}: "Department heads across all subject matter areas who report journal affected change in classroom practice will reveal no differences as to whether or not they have designed new courses or units." The data were insufficient to test the hypothesis.

H_{o4C}: "Department heads across all subject matter areas who report journal affected change in classroom practice will reveal no differences as to whether or not they have initiated changes in their own practice." The data were insufficient to test the hypothesis.

H_{o4D}: "Department heads across all subject matter areas who report journal affected change in classroom practice will reveal no differences as to their self assessed reading ability." The data were insufficient to test the hypothesis.

H_{o4E}: "Department heads across all subject matter areas who report journal affected change in classroom practice will reveal no differences as to the degree of their use of journals to improve practice." The data were insufficient to test the hypothesis.

H_{o4F}: "Department heads across all subject matter areas who report journal affected change in classroom practice will reveal no differences as to the degree to which they share curriculum information with their colleagues." The data were insufficient to test the hypothesis.

The data for the study have been presented in this chapter. In Chapter 5 will be offered a summary, discussion, conclusions, and recommendations for future study.

Chapter 5

SUMMARY, DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

This chapter presents the results of the present study as they pertain to the influence of education journals on the classroom practice of California public high school department heads. Presentation of the elements of the summary, discussion, conclusions, and recommendations in most cases will parallel the order of presentation in Chapter 4.

SUMMARY

This study was undertaken in an effort to discern the influence of education journals on the classroom practice of California public high school department heads. No such study was evident in the literature. Answers to questions posed in Chapter 1 of this study and responses to the testing of related hypotheses would likely result in improved educational service to students and high school department heads and benefit educational planners, school administrators, teacher educators, editors, librarians, and other education related persons.

One thousand two hundred sixty-four heads of departments of those areas of study embracing courses required by California for high school graduation were identified randomly to be surveyed systematically. A series of transactions by mail with district and school officials culminated in the respondents' completing and returning 549 questionnaires that had been originated by the investigator. The pilot-tested instrument entitled, "High School Department Leadership: Sources of Educational Leadership and Change in Classroom Practice," included twenty open items and twenty closed items and was designed specifically to provide data to answer six questions and test four related hypotheses, all bearing directly on the objectives of the study.

The data were coded and processed electronically. Analyses were performed using programs from N. H. Nie, et al., Statistical Package for the Social Sciences (SPSS, second edition). The descriptive and inferential subprograms produced results which were tabulated and otherwise presented. Inferential data were treated by means of the one-way analysis of variance and the Modified Least Significanct Differences Test at the .05 level of significance.

The responses to the questionnaire produced the findings analyzed in Chapter 4. The data suggested answers for each of the six questions of the study. The data analysis stimulated discussion comparing and contrasting the findings with the related literature as surveyed in Chapter 2. From the analysis were drawn general conclusions about the characteristics of the California department heads randomly selected for the sample. Recommendations for further study were proposed.

The findings presented in Chapter 4 indicated (1) that the influence of education journals on the classroom practice of the California high school department heads was modest; and (2) that it was possible to identify a variety of characteristics that may typify department heads whose classroom practice is affected by journal literature.

The sample was controlled for size of school. The obtained responses closely paralleled the expected population strata, except at the small school level where responses could be described as adequate. Expected was 20 percent of the sample for each of the five departments. Obtained was a range of responses which the investigator believes accurately represented the population in numbers. The range of responses from the departments varied from 16.5 percent for science heads to 23.2 percent for English heads.

Characteristics of the respondents as a group may be summarized as follows. Almost three-fourths of the department heads were male. Most had served as department heads for fewer than 10 years, and almost half for fewer than five years. More than half served in suburban schools, nearly half in schools with declining enrollment. Most gave themselves high marks for innovativeness and for keeping current in their fields. Most had designed new courses or instructional units in the preceding two years.

More than half recently had supervised a beginning teacher or student teacher. Nearly all department heads reported that recently they had instituted one or more changes in their classroom practice. More than four-fifths rated themselves as good or excellent readers, but almost half declared that they had no time to read or that the journals are not helpful and/or that they preferred other modes of maintaining their professional currency.

Characteristics were different for the subgroup of 21 percent of the sample who reported that journals did influence their practice. That subgroup is the subject of most of the discussion that follows.

DISCUSSION

Discussion relates responses of the journal-influenced department heads both to the questions of the study and to pertinent literature. The subjects for discussion will be presented in the order of the questions.

Question 1: What Are the Changes in Practice That Department Heads Report Have Been Stimulated by Journal Literature?

Data for the changes in practice indicated that on the average those department heads who were stimulated by journals to make changes made them chiefly in the areas of curriculum design and teaching techniques and less frequently in the areas of testing and teaching materials. The category of curriculum design included major changes in content. Teaching technique encompassed methodology in general, but excluded motivation and discipline/classroom management, each categories themselves. The amounts of change reported in the areas of discipline, motivation, grouping, and public relations were remarkably small. These findings appear to corroborate some of the research inferences of Hughes and Johnston-Doyle.[1]

Nearly all the changes reported were what may be described as "practical," as contrasted with "theoretical." The character of such changes appears to be consistent with findings in studies of teacher populations at other grade levels by researchers such as Eicher and Wood,[2] McCarthy, et al.,[3] and Levinsohn.[4] Subjects on the front pages of the public press as well as the education press and easily the chief expressed concern of teachers and the public for a decade as reported by Gallup,[5] discipline and classroom management as classroom change subjects were affected relatively little by the journals.

---

[1] Andrew S. Hughes and Kimberly Johnston-Doyle, "What Do Teachers Read? Professional Reading and Professional Development," Education Canada, XVIII (Fall, 1978), p. 42.

[2] Charles E. Eicher and Robert W. Wood, "Reading Habits of Elementary School Teachers and Principals," Education, XII (Summer, 1977), pp. 385-391.

[3] Martha M. McCarthy, George D. Kuh, and Joan M. Beckman, "Characteristics and Attitudes of Doctoral Students in Educational Administration," Phi Delta Kappan, LXI (November, 1979), p. 201.

[4] Florence Hamlish Levinsohn, "In Defense of the Status Quo," Paper presented at the Annual Meeting of the American Educational Research Association (New York City, April 7, 1977), p. 8.

[5] George H. Gallup, "The First Ten Years: Trends and Observations," A Decade of Gallup Polls of Attitude toward Education 1969-1978, ed. S. M. Elam (Bloomington: Phi Delta Kappa), 1-5.

Question 2: Are Journal-Influenced Changes in Practice Experienced Equally by the Departments Selected for Study?

Journal-influenced changes in practice were not experienced equally by the department heads. Equality was observed neither in number nor in kind of change. This was an area that offered no evident comparisons in the literature.

With 21 journal-influenced changes and a mean of 0.225 changes, social science department heads reported fewer journal-influenced changes than did all other department heads. Their changes were more often in the area of curriculum design, the category which included change in course content. The changes of the department heads with the highest mean numbers of journal-influenced change --science and physical education-- also reported curriculum design as the most frequently affected category. However, these other department heads also reported relatively high incidence of change in other areas, such as in teaching techniques (science) and in teaching materials (physical education). The changes predominant in English and mathematics were in testing and in techniques of teaching.

It seems likely on conjecture that as some of the innovations of the 1960's and 1970's have declinced in favor, as noted in Chapter 2, practitioners have had reason to seek content ideas. The investigator believes that, for example, the "new social studies" with its identification of the social sciences as discrete subjects for high school study may be giving way to the curriculum sequences typical of earlier times, the "basic" social studies constituted as western civilization, world history, United States history, and American government. As the social scientists are required to become more exclusively historians, a few may seek in the journals at least new approaches to the more aged content. Perhaps the social scientists represented in the present study were part of the phenomenon of reticence referred to by Sarason.[6]

In spite of the back to basics movement, social studies teachers of the investigator's acquaintance are studying the new literature of futuristics. It may be that such changes also contributed to the modest but distinct curriculum design interest featured in the social studies data of this study.

In the investigator's experience, physical education teachers in California have been under pressure for change on two major points. First, content for the "new physical education" that appeared in California high schools in the mid-to-late 1970's is still attempting to become manifest in all high schools by the promotion of new games and attitudes about physical education. It appears to have support among high school students. As observed by Lawson,[7] the journals of physical education associations have gone to some editorial lengths to emphasize "new" physical education in recent years. Second, the California Legislature has recently made physical education for eleventh and twelfth graders optional at the discretion of local boards of education.[8] These combined pressures may be sufficient to have stimulated department heads to look to their journals for content advice, as Mour suggested.[9]

---

[6] Seymour B. Sarason, The Culture of the School and the Problem of Change (Boston: Allyn and Bacon, 1971), p. 9.

Under almost any circumstances mathematics is a subject one might expect would be associated prominently with testing because of the nature of the methodology employed traditionally by mathematics teachers, "teach and test." Also, California's recently enacted (1978) minimum competency legislation requires student testing at specified secondary levels in the areas of reading, writing, and arithmetic.[10] The legislation combined with a general public concern for accountability render it reasonable for one to infer that mathematics and English department heads, as the subject area executives primarily affected by the legislation would evidence strong special interest in testing.

---

[7] Hal A. Lawson, "Physical Education and Sport in the Black Community: The Hidden Perspective," Journal of Negro Education, XLVIII (Spring, 1979), p. 195.

[8] California, Education Code (1978).

[9] Stanley Mour, "Do Teachers Read?" Reading Teacher, XXX (January, 1977), p. 397.

[10] California, op. cit.

The science teacher department heads reported the greatest average number of changes . Their changes were distributed mainly among curriculum design, teaching techniques, and teaching materials. Such findings may be seen to agree generally with discussion by Childs[11] and to indicate that the science department heads are continuing to seek ways from a variety of resources to bring new content to their students in a field whose information frontiers are seen in all the media as expanding far more quickly than the textbooks can accommodate. From the findings one may infer also that these self-professed excellent readers have observed with the investigator a decline of popular support and enthusiasm for science and the possibly consequent enrollment decline in high school science courses during the last decade. They may well be involved in addressing the problem.

Question 3: Which Publications Do High School Department Heads Cite as Having Most Direct or Practical Value in Their Classroom Practice?

Department heads on the average cited the journals of their own disciplines as having most direct or practical value in their classroom practice. It is evident that the department heads as a group consulted the journals of their own disciplines and not those of other subject matter areas.

P. E. Childs, "Chemical Literature for the Teacher," Education in Chemistry, XXXII (May, 1979), p. 86.

Science department heads produced not only a higher mean number of journal-influenced changes in their classroom practice than did other department heads, but also a higher rate of attributed influence for the journals of their discipline than those of any other. This latter finding was in relative concert with data assessed by Spencer[12] in his study of British secondary science teachers. Means calculated from Table 4.21 to demonstrate citation by department heads of their own subject area journals show that science publications predominated by more than two to one over those which appeared to be valued least for change inspiration, the journals of the social science heads.

Physical education and English heads on the average cited respectively 1.6 and 1.1 journals of their own disciplines. In the context of the present study, these department heads saw their journals as having relatively high direct and practical value. It may be observed in Appendix P that the titles of journals cited by physical educators included many of the sports-specific publications found on the popular market. These were cited with far greater frequency than were the journals of the physical education related organizations. It may be recalled that staff in the area of physical education often serve two major school interests, physical education and athletics, and that their reading is very likely to reflect the additional interests. In the experience of the investigator, one other department often includes members with active interest in interscholastic athletics. That is the social science department. No conclusions have been drawn from the data of this study about possible effects of such interest.

---

[12] M. Spencer, "Some Agents of Science Curriculum Change," Education in Science, LXXXII (April, 1979), p. 22.

The journals of mathematics were found to be cited as less valued for direct and practical use, achieving a mean by their department heads of 0.885. Science and mathematics heads appeared more frequently than other department leaders to consult mutually the journals across their disciplines; however, such cross-disciplinary influence was minimal and appears to relate to findings of Luce and Johnson.[13] It is unknown whether such influence was the result of cross-disciplinary interest or leadership responsibility for more than one department.

The journals having the most direct and practical value besides those of the subject matter disciplines were the journals of general education. General education was the category that included not only the journals produced by the educator advocacy groups, but also the publications of the university presses. Of the journals in this category, however, the advocacy group journals were cited more than four times more frequently than those of the university presses. This phenomenon is most likely the result of the journals' accompanying advocacy organization membership and their probably more frequent availability in the schools.

---

[13] Terrence S. Luce and Dale M. Johnson, "Rating of Educational and Psychological Journals," Educational Researcher, VII (November, 1978), p. 10.

One may observe in the department heads' own data that social science heads found journals less directly practical, valuable, and useful than did the department heads of all other subject areas. Given the potentially dynamic and change-prone nature of at least some of the subject matter, the lower average frequency of journal citation in social science seen in Tables 4.21 and 4.22 may have found a balancing element in the higher than average frequency of other change sources cited by the social science heads.

The small apparent value afforded the journals of the disciplines other than those represented by the five named departments of the study is both understandable and misleading. The other departments comprised a fraction of the sample. A mean calculated for the entire group of other subject department heads produced 1.769, a figure indicating mean citation of other subject journals by other subject department heads higher than those of any subject named group. This group represented business education, industrial arts, home arts, and music. Examination of representative publications for these areas reveals that each is an area which includes a high apparent ratio of the practical over the theoretical.

The general interest publications accounted for the least amount of citation. Citation of such reading may be related to the personal reading characteristics of a department head; that is, perhaps only the department head who reads widely and well is likely to recall and/or report such possible influence. In all, the citations for the general interest publications category were produced by fewer than two dozen department heads.

Question 4: Does Department Head Membership in Journal-Publishing Professional Organizations Relate to Reported Changes in Practice?

While the data appear mixed, department head membership in journal-publishing professional organizations seems to be associated with reported changes in practice. This is an area of study without evident attention in the literature. Interpretation of the data was rendered more sensible by ranking the obtained means for reported journal-influenced change, for change influenced by all sources, and for membership in journal-publishing organizations.

Organization membership does appear to be associated with journal-influenced change in that these characteristics correspond, as illustrated in Tables 4.23 and 4.24. For example, the correspondence of organizational membership with journal-influenced change in practice is relatively high among physical education heads, whereas such correspondence is relatively low among social science heads. For the all-source changes, approximation is somewhat closer for

English, mathematics, social science, and other department heads.

It appears that organizational membership may tend to stimulate change of all kinds, including that which department heads recognize has been inspired directly by the journals. Membership in the educator advocacy groups appears to be associated with a relatively high degree of change, as does membership in the subject matter organizations. It is equally apparent that for the most part, the group of department heads who reported the fewest professional memberships also reported the least journal-influenced change. It is also possible that those department heads who are especially curious, energetic, and bright will be among those who read journals, effect changes, and join the professional associations.

Question 5: How Frequent among Department Heads Is the Sharing with Colleagues of Journal and Other Information about Classroom Practice?

Contrary to the findings of Frederick and Kincaid and of Steinberg, sharing of classroom practice information among colleagues evidently was highly frequent,[14] but information from circulated copies of journal articles was not at all the favored mode of sharing. Discussion clearly was the favored mode.[15] Among the subject matter areas, heads of the alternate subsample departments were most relatively favorable to the sharing of journal articles. These leaders were followed closely by science department heads in their enthusiasm for article sharing.

---

[14] Sally Frederick and Barry Kincaid, "What Beginning English Teachers Need to Know about Keeping up Professionally: Boiler Room Blues, or Beyond the Price of Day-Old Bread," English Education, X (May, 1979), p. 261.

The data related to this question were compatible with other findings of the study that show science department heads as prominent among those who appear to represent most accurately the department leader who consults and uses the journals.

Question 6: Is There a Complex of Professional and Personal Characteristics That Appears to Typify the Department Heads Who Report Journal-Influenced Change in Their Classroom Practice?

There does appear to be a complex of professional and personal characteristics that typifies department heads who reported journal-influenced changes in their classroom practice. Perhaps the most striking characteristic of such department heads is that even though on the average, as illustrated in Table 4.52, they estimated their journal use as not remarkably high, their actual practice revealed in Table 4.54 shows journal use as constituting their single most important stimulus to change. This phenomenon is in marked contrast to the department heads of the entire sample whose dominant stimuli were for every named department (1) their colleagues and students and (2) on-site inservice experiences --the former a finding consistent with inferences of Goodlad, as discussed in Klein, et al.,[16] and Hoffman.[17]

---

[15] Heinz Steinberg, "Social Integration as the Source of Motivation to Read among Adults," Journal of Reading, XII (May, 1979), p. 746.

In contrast with the expectations of Houts, et al.,[18] of finding limited changes in larger schools, the journal-influenced department head was likely to be active in a school of almost any size. On the average, the journal-influenced department head worked in a suburban school with stable or declining enrollment. He or she probably constituted part of a younger rather than older cadre who would have served in the leadership position for five or fewer years, a finding apparently contrary to that of the Rand study data described by McLaughlin and Marsh[19] and of studies reported by Harmer.[20] In this regard the data appear to differ also from research conclusions of Cogan and Anderson[21] and Brownlee.[22]

---

[16] Frances M. Klein, Kenneth A. Tye, and Joyce E. Wright, "A Study of Schooling: Curriculum," Phi Delta Kappan, LXI (December, 1979), pp. 244-248.

[17] Charlotte K. Hoffman, "Teacher Training Inside Out," American Education, IV (August/September, 1979), p. 6.

[18] Paul Houts, Tom Koerner, and Robert J. Krajewski, "View from the Bridge: A Discussion," Theory Into Practice, XVIII (February, 1979), p. 7.

[19] Milbrey Wallen McLaughlin and David D. Marsh, "Staff Development and School Change," Staff Development: New Demands, New Realities, New Perspectives, eds. Ann Lieberman and Lynne Miller (New York: Teachers College, 1979), p. 94.

[20] Earl W. Harmer, "Veteran Teachers: Old Myths and New Realities," Phi Delta Kappan, LX (March, 1979), pp. 536-538.

The typical journal-influenced department head considered himself or herself innovative and professionally current to a high degree, had recently designed a new course or instructional unit, and within the previous two years was likely to have supervised a student teacher or beginning teacher. She or he was more likely than non-journal-influenced colleagues to have scored very high on a self rating of reading ability. In this characteristic the journal-influenced heads were unlike the teachers described by Dinnan and Hafner,[23] Baldwin and Readence,[24] and Ilika;[25] and like those referred to by Anders and Mitchell.[26]

---

[21] John J. Cogan and Douglas H. Anderson, "Teachers' Professional Reading Habits," Language Arts, LIV (March, 1977), p. 258.

[22] Geraldine D. Brownlee, "Characteristics of Teacher Leaders," Educational Horizons, LVII (Spring, 1979), pp. 119-122.

[23] James A. Dinnan and Lawrence E. Hafner, "Reading Interests and Abilities of College Students," Reading Improvement, IX (Winter, 1970), pp. 63-65.

[24] R. Scott Baldwin and J. E. Readence, "Critical Reading and Perceived Authority," Journal of Reading, XXII (April, 1979), p. 619.

[25] Joseph Ilika, "A Critical Review of the Teacher Readership Characteristics Research and the Implications for Performance Based Teaching," Paper presented at the Annual Meeting of the International Reading Association, (19th, New Orleans, May 3, 1974), p. 8.

[26] Patricia L. Anders and Judy Nichols Mitchell, "Comparing Elementary and Secondary Teachers: Reading Attitudes, Awareness, and Abilities," (unpublished manuscript, University of Arizona, Tucson, 1978), p. 6.

The journal-influenced department head frequently found the journals to be a stimulus to all manner of change and would consult not only the journals of his or her discipline for their direct and practical value, but also those of the educator advocacy organizations to which he or she typically belonged. Usually, the department heads who were stimulated by journals to initiate classroom change would find the educator advocacy organizations' journals indirectly useful; and those who were science heads would find science journals not only directly useful, but also indirectly valuable. The journal-influenced department head was more professional association-oriented than others, characteristically belonging to more than one subject matter organization and at least one educator advocacy association. Science heads who were journal-influenced showed an especially high interest in subject matter professional organization affiliation.

The department heads who were journal-influenced were much more likely than others to give a fairly high rating to the circulation of journal articles as a mode of sharing curriculum information with colleagues. She or he was as enthusiastic as others for discussion as the favorite means of sharing information.

Typically, the journal-influenced department head read primarily for enrichment and to stay professionally current. He or she read also because a title appeared to be interesting and because reading is enjoyable.

The Subsamples Provided Little Data Contrast

The members of the organized sample of alternate respondents represented departments other than the major five. The alternate members paralleled their named department colleagues in many respects, both as associated with the sample and as a very small part of the journal-influenced group. One interesting difference noted above was the comparatively high citation by these department heads of the journals associated with their subject matter. Other differences were few and, among the journal-influenced group, included the following: Fewer alternate heads than the others supervised new or student teachers, most reported rather low journal use, more reported teaching techniques as the change in practice, more ascribed change to the journals of general education and fewer to the educator advocacy organizations.

Members of the non-respondent subsample provided no contrasting data. Their responses evidenced no differences from those of the total sample.

CONCLUSIONS

It was possible to formulate conclusions from the data. It can be concluded that

1. journals influence the curriculum design,

teaching techniques, and other classroom practice of about a fifth of California high school department heads;

2. journals have minimal influence in the areas of discipline, motivation, grouping, and public relations on the practice of department heads who read journals;

3. journal-influenced changes made by department heads are mostly "practical" as contrasted with "theoretical;"

4. science, physical education, English, and mathematics department heads are more influenced by journal literature than are social science department heads;

5. science department heads are somewhat more receptive to journal influence on their practice than are other department heads;

6. department heads find the journals of their own disciplines as having the most direct and practical value in their classroom practice;

7. department head membership in both subject matter professional organizations and educator advocacy organizations is associated with a relatively higher degree of classroom change than is department head non-membership in such organizations;

8. department heads who report journal influence frequently share with their colleagues information about classroom practice;

9. department heads find discussion to be the preferred mode of sharing with colleagues information about classroom practice;

10. journals constitute the single most important stimulus to change for department heads whose practice is influenced by journals; and that

11. journal-influenced department heads exhibit certain characteristics, including the following: relative recency in the leadership position, innovativeness, good to excellent self-assessment of reading ability, membership in subject matter and educator advocacy organizations, interest in circulating journal articles among colleagues, enjoyment of reading.

RECOMMENDATIONS FOR FURTHER STUDY

Based on the data collected in the present study, it is recommended that

1. the processes be studied by which journal influenced classroom change is implemented;

2. editors of journals conduct periodic needs assessments of professionals in the fields served by the journals; and that

3. the colleagues and their information sources on whom department heads and other teachers apparently rely for much of their curriculum information be identified and their communication patterns within schools be analyzed and characterized.

A FINAL COMMENT

The investigator believes that dissemination of data from this study can contribute to a better understanding of part of the change process in the public schools. It is apparent from the data that department heads who participated in this study relied on one or more of several main sources to maintain their professional currency and upgrade their practice.

Somewhere between a seventh and nearly a third of such maintenance and upgrading was provided by the journals, depending on the department with which the head was associated. One of the main sources was "on-site inservice," a category which included seminars, conferences, locally generated programs, and contact for the participating department heads with visiting experts.

The predominating source of information for most of the department heads was their colleagues and students (with students contributing a small fraction to the category data). The department heads reinforced this point by identifying discussion as their overwhelmingly favorite mode of communicating curriculum information. It may be inferred that much of the curriculum information was communicated by department heads who got their information from colleagues who got theirs from colleagues.

Research on the quantity, nature, and quality of discussion among high school colleagues is not extensive.

The relative isolation from adult contact endured by classroom teachers is documented, as evidenced in Chapter 2 above. One hopes and expects that the discussion among teachers cited in this study may be functioning in an effective if informal communications network that is carrying to the participants word of new strategies and better ways to deal with problems. Even a brief glance at the contents of a representative group of education journals is sufficient to convince one that dialogue among department heads and their colleagues and their subsequent classroom practice can be enriched by reference to the journals. The data presented by this study appear strongly to the investigator to suggest so.

BIBLIOGRAPHY

A. BOOKS AND COLLECTED DOCUMENTS

Argyris, Chris, and Donald Schon. *Theory in Practice: Increasing Professional Effectiveness*. San Francisco: Jossey-Bass, 1974.

Barnard, Chester I. *The Functions of the Executive*. Cambridge: Harvard University Press, 1938.

Barzun, Jacques. *The House of Intellect*. New York: Harper and Brothers, 1959.

________. *Science: The Glorious Entertainment*. Toronto: University of Toronto Press, 1964.

Behling, Orlando, and C. Schriesheim. *Organizational Behavior: Theory, Research, and Application*. Boston: Allyn and Bacon, 1976.

Berman, Paul, and Milbrey W. McLaughlin. *Federal Programs Supporting Educational Change, Volume IV: The Findings in Review*. Santa Monica: Rand Corporation, 1975.

________. *Federal Programs Supporting Educational Change, Volume VII: Factors Affecting Implementation and Continuation*. Santa Monica: Rand Corporation, 1977.

________. *Federal Programs Supporting Educational Change, Volume VIII: Implementing and Sustaining Innovations*. Santa Monica: Rand Corporation, 1978.

Bennis, Warren. *The Unconscious Conspiracy: Why Leaders Can't Lead*. New York: AMACOM, 1976.

________, Kenneth D. Benne, R. Chin, and K. E. Corey. *The Planning of Change*, 3d ed. New York: Holt, Rinehart and Winston, 1976.

Borg, Walter R., and Meredith D. Gall. *Educational Research: An Introduction*. 2d ed. New York: David McKay, 1976.

Bower, Gordon H., ed. *The Psychology of Learning and Motivation*, Volume 9. New York: Academic Press, 1975.

Broudy, Harry I. The Real World of the Public Schools. New York: Harcourt, Brace, Jovanovich, 1972.

California. Education Code. Sacramento: State Department of Education, 1978.

________. California Public School Directory, 1979. Sacramento: State Department of Education, 1979.

Carroll, John S., and J. W. Payne, eds. Cognition and Social Behavior. New York: Halsted Press, 1976.

Carver, Fred., and T. J. Sergiovanni, eds. Organizations and Human Behavior: Focus on Schools. New York: McGraw-Hill, 1969.

Change Processes in the Public Schools. Eugene: Oregon University, 1965.

Conant, James B. The Education of American Teachers. New York: McGraw-Hill, 1963.

Cremin, Lawrence A. The Transformation of the School. New York: Alfred A. Knopf, 1961.

Davis, O. L., ed. Perspectives on Curriculum Development 1776-1976. Washington: Association for Supervision and Curriculum Development, 1976.

Edelfelt, Roy A., and Margo Johnson, eds. Rethinking Inservice Education. Washington: National Education Association, 1975.

Elam, Stanley M., ed. A Decade of Gallup Polls of Attitude Toward Education 1969-1978. Bloomington: Phi Delta Kappa, 1978.

Engroff, Dennis. Multi-Unit High School: Department Chairman's Manual. Washington: Bureau of Elementary and Secondary Education, Department of Health, Education, and Welfare, 1976.

Etzioni, Amitai, ed. The Semi-Professionals and Their Organizations. New York: Free Press, 1969.

________. The Active Society. New York: Free Press, 1969.

Festinger, L., and D. Katz, eds. Research Methods in the Behavioral Sciences. New York: Dryden Press, 1963.

Foshay, Arthur W., ed. Considered Action for Curriculum Improvement. Alexandria: Association for Supervision and Curriculum Development, 1980.

Fox, R. S., and R. Lippitt. The Innovation and Sharing of Teaching Practices: Stimulating Adoption and Adaptation of Selected Teaching Practices. Ann Arbor: Institute for Social Research, University of Michigan, 1967.

Gardner, John W. Excellence. New York: Harper and Row, 1962.

Ginott, Haim. Teacher and Child. New York: Macmillan, 1972.

Goodlad, John I. The Dynamics of Change in Schools. New York: McGraw-Hill, 1975.

Greenwood, Peter W., Dale Mann, and M. W. McLaughlin. Federal Programs Supporting Educational Change, Volume III: The Process of Change. Santa Monica: Rand Corporation, 1975.

Haber, Audrey, and Richard Kenyon. General Statistics. Menlo Park: Addison-Wesley, 1971.

Hall, E. E., R. C. Wallace, and W. A. Dossett. A Developmental Conceptualization of the Adoption Process within Educational Institutions. Austin: Research and Development Center for Teacher Education, University of Texas, 1973.

Havighurst, Robert J., and Bernice L. Neugarten. Society and Education. 2d ed. Boston: Allyn and Bacon, 1962.

Henning, Joel F., Charles White, Michael Sorgen, and Leigh Stelzer. Mandate for Change: The Impact of Law on Educational Innovation. Chicago: American Bar Association, 1979.

Highet, Gilbert. The Immortal Profession. New York: Weybright and Talley, 1976.

Hooker, Clifford P., ed. The Courts and Education, 77th Yearbook of the National Society for the Study of Education, Part I. Chicago: University of Chicago, 1978.

House, Ernest R. The Politics of Educational Innovation. Berkeley: McCutchan, 1974.

Ianni, Francis A. J., ed. Conflict and Change in Education. Glencoe: Scott, Foresman, 1975.

Janis, Irving L., and Leon Mann. Decision-Making: A Psychological Analysis of Conflict, Choice, and Commitment. New York: Free Press, 1977.

Jones, Richard M. Fantasy and Feeling in Education. New York: New York University, 1968.

Kahn, Herman, and B. Bruce Briggs. Things to Come: Thinking about the 70's and 80's. New York: Macmillan, 1972.

Kerlinger, Fred N. Foundations of Behavioral Research. 2d ed. New York: Holt, Rinehard and Winston, 1973.

Kissinger, Henry. White House Years. Boston: Little, Brown, 1979.

Knezevich, Stephen J. Administration of Public Education. 3d ed. New York: Harper and Row, 1975.

Knox, William G. Power or Pawn: Leadership and the Department Head. Toronto: Ontario Secondary School Teachers Federation, 1977.

Lawrence, Gordon. Patterns of Effective Inservice Education. Tallahassee: Florida Department of Education, 1974.

Leonard, George. The Transformation. New York: Delacorte, 1972.

Lieberman, Ann, and Lynne Miller, eds. Staff Development: New Demands, New Realities, New Perspectives. New York: Teachers College Press, 1979.

Lortie, D. Schoolteacher: A Sociological Study. Chicago: University of Chicago, 1975.

Mann, P. H., and J. L. Burgoyne. Books and Reading. London: Andre Deutsch, 1969.

Michaelis, John U., Ruth H. Grossman, and L. F. Scott. New Designs for Elementary Curriculum and Instruction. 2d ed. New York: McGraw-Hill, 1975.

Miller, D. W., and M. K. Starr. The Structure of Human Decisions. Englewood Cliffs: Prentice-Hall, 1967.

Montague, Ashley. Man in Process. New York: World, 1967.

Newell, Arthur, and Herbert A. Simon. Human Problem Solving. Englewood Cliffs Prentice-Hall, 1967.

Nicholson, Alexander, and Bruce Joyce. ISTE Report III. Palo Alto: Stanford Center for Research and Development in Teacher Education, 1976.

1978 Consumer Research Study on Reading and Book Purchasing, BISG Report Number 6. New York: Yankelovich, Skelly, and White, 1978.

O'Brien, Marjorie M. *The Dilemma of the English Department Head: A Report on the Survey of the Role and Responsibilities of the Heads of English Departments in Massachusetts Secondary Schools*. Neednam, Massachusetts: Massachusetts Council of Teachers of English, 1977.

Ornstein, Allan C. *Teaching in a New Era*. Champaign: Stipes, 1976.

Peterson, Penelope L., and Herbert J. Walberg, eds. *Research on Teaching: Concepts, Findings, and Implications*. Berkeley: McCutchan, 1979.

Piel, Gerard. *The Acceleration of History*. New York: Alfred A. Knopf, 1972.

Postman, Neil, and Charles Weingartner. *The School Book*. New York: Delacorte, 1973.

Pritzkan, Philo T. *Dynamics of Curriculum Improvement*. Englewood Cliffs: Printice-Hall, 1959.

Putting Knowledge to Use: A Distillation of Literature Regarding Knowledge Transfer and Change. Los Angeles: Human Interaction Research INstitute, 1976.

Reddin, W. J. *Managerial Effectiveness*. New York: McGraw-Hill, 1970.

Roberts, Arthur D., ed. *Educational Innovation: Alternatives in Curriculum and Instruction*. Boston: Allyn and Bacon, 1975.

Sarason, Seymour B. *The Culture of the School and the Problem of Change*. Boston: Allyn and Bacon, 1971.

Scribner, Jay D., ed. *The Politics of Education, 76th Yearbook of the National Society for the Study of Education, Part II*. Chicago: University of Chicago, 1977.

Selltiz, Claire, Lawrence S. Wrightsman, and Stuart W. Cook. *Research Methods in Social Relations*. 3d ed. New York: Holt, Rinehart and Winston, 1976.

Sergiovanni, Thomas J. *Handbook for Effective Department Leadership: Concepts and Practices in Today's Secondary Schools*. Boston: Allyn and Bacon, 1977.

________, and F. D. Carver. *The New School Executive: A Theory of Administration*. New York: Harper and Row, 1973.

Silberman, Charles. *Crisis in the Classroom: The Remaking of American Education*. New York: Random House, 1970.

Squire, James R., and Roger K. Applebee. High School English Instruction Today. New York: Appleton-Century-Crofts, 1968.

Stratemeyer, Florence B., Hamden L. Forkner, M. G. McKim, and A. H. Passow. Developing a Curriculum for Modern Living. 2d ed. New York: Columbia University, 1957.

Taba, Hilda. Curriculum Development: Theory and Practice. New York: Harcourt, Brace and World, 1962.

Thomas, Lewis. The Medusa and the Snail. New York: Viking, 1974.

Ulrich's International Periodicals Directory. 17th ed., 1977-78. New York: Bowker, 1977.

Van Til, William, ed. Curriculum: Quest for Relevance. New York: Houghton Mifflin, 1971.

Wandt, Edwin, ed. A Cross-Section of Educational Research. New York. McKay, 1965.

Weldy, Gilbert R. Principals: What They Do and Who They Are. Reston: National Association of Secondary School Principals, 1979.

Zaltman, Gerald, David Florio, and L. Sikorski. Dynamic Educational Change. New York: Free Press, 1977.

B. ARTICLES

Anderson, Bill. "To Improve Reading, Use Lots of Books and Common Sense," Executive Educator, I (April, 1979), 29, 34.

Anderson, Richard C., and W. Barry Biddle. "On Asking People Questions about What They Are Reading," The Psychology of Learning and Motivation, Volume 9, ed. Gordon H. Bower. New York: Academic Press, 1975.

Andolina, Charlene, and Allen Berger. "The Printed Word That Comes Periodically to Schools --Educational Journals and Magazines," Journal of Reading, XXIII (October, 1979), 36-38.

Arends, Richard, R. Hersh, and Jack Turner, "Inservice Education and the Six O'Clock News." Theory Into Practice, XVII (June, 1978), 196-205.

Arlin, Marshall. "Teacher Transitions Can Disrupt Time Flow in Classrooms," American Educational Research Journal, XVI (Winter, 1979), 42-56.

Asimov, Isaac. "A Cult of Ignorance," Newsweek, January 21, 1980, 19.

Bain, Helen P., and J. Ronald Groseclose. "The Dissemination Dilemma and a Plan for Uniting Disseminators and Practitioners," Phi Delta Kappan, LXI (October, 1979), 101-103.

Baldwin, R. Scott, and J. E. Readence. "Critical Reading and Perceived Authority," Journal of Reading, XXII (April, 1979), 617-622.

Barzun, Jacques. "The Future of Reading Books," Journal of Communication, XXVIII (Autumn, 1978), 10-17.

Bashook, Philip G. "A Genealogy of Today's Professions Education: Where Do You Belong?" Professions Education Researcher, I (December, 1979), 2.

Beachler, Dean E., D. C. Joswick, and R. J. Shubert. "Are Your Professionals Staying Professional?" Personnel Journal, XII (September, 1978), 478-483, 511.

Berger, Allen, and Charlene Andolina. "How Administrators Keep Abreast of Trends and Research in Reading," Journal of Reading, XXI (November, 1977), 121-125.

Berger, Natalie S. "Why Can't John Read? Perhaps He's Not a Good Listener." Journal of Learning Disabilities, XI (December, 1978), 31-35, 38.

Bayer, Manfred, and Gerhard E. Ortner. "Professional Development of Educational Administration: Fundamentals and Application," Educational Administration, IX (Winter, 1978-79), 91.

Benham, Barbara J. "How a Staff Change Agent Can Help Teachers, Schools," NASSP Bulletin, LX (November, 1976), 92-97.

Benne, Kenneth D., Warren G. Bennis, and Robert Chin. "Planned Change in America," The Planning of Change, eds. W. G. Bennis, et al., 3d ed. (New York: Holt, Rinehart and Winston, 1976).

Blumberg, Arthur. "Supervision: What Is and What Might Be," Theory Into Practice, XV (October, 1976), 284-292.

Borko, Hilda, Richard Cone, N. A. Russo, and R. J. Shavelson. Teachers' Decision Making," Research on Teaching: Concepts, Findings, and Implications, eds. P. L. Peterson and H. J. Walberg (Berkeley: McCutchan, 1979).

Boyd, William Lowe. "The Politics of Curriculum Change and Stability," *Educational Researcher*, VIII (February, 1979), 12-18

Brandt, Ron. "A Conversation with John Goodlad," *Educational Leadership*, XXXVII (December, 1979), 224-228.

Broudy, Harry S. "What Do Professors of Education Profess?" *Educational Forum*, XLIV (May, 1980), 441-451.

Brownlee, Geraldine. "Characteristics of Teacher Leaders," *Educational Horizons*, LVII (Spring, 1979), 119-122.

Button, H. Warren. "Creating More Useable Pasts: History in the Study of Education," *Educational Researcher*, VIII (May, 1979), 3-9.

Candoli, I. C. "The Urban School System," *Theory Into Practice*, XV (October, 1976), 243-252.

Childs, E. P. "Chemical Literature for the Teacher," *Education in Chemistry*, XVI (May, 1979), 86-89.

Chin, Robert, and Kenneth D. Benne. "General Strategies for Effecting Changes in Human Systems," *The Planning of Change*, eds. W. G. Bennis, et al., 3d ed. (New York: Holt, Rinehart and Winston, 1976), 18-34.

Czajkowski, Theodore J., and Jerry L. Patterson. "Curriculum Change and the School," *Considered Action for Curriculum Improvement*, ed. A. W. Foshay (Alexandria: Association for Supervision and Curriculum Development, 1980), 158-175.

Clark, Christopher M., and Robert J. Yinger. "Teachers' Thinking," *Research on Teaching: Concepts, Findings, and Implications*, eds. P. L. Peterson and H. J. Walberg (Berkeley: McCutchan, 1979), 231-263.

Cogan, John J. "Elementary Teachers as Nonreaders," *Phi Delta Kappan*, LVI (March, 1975), 495-496.

————, and Douglas H. Anderson. "Teachers' Professional Reading Habits," *Language Arts*, LIV (March, 1977), 495-496.

Combs, Arthur W. "Teacher Education: The Person in the Process," *Educational Leadership*, XXXV (April, 1978), 558-561.

Cook, Wanda Dankasza. "Adult Literacy Education in the United States," *Research on Reading*, V (April, 1979), 2.

Cramer, Jerome. "Why They Bore You: The Story behind the Books You Didn't Read Last Year," American School Board Journal, CLXVI (April, 1979), 44-45.

Currie, Bruce F. "Continuing Education from Medical Periodicals," Journal of Medical Education, LI (May, 1976), 420.

Deal, Terrence E., and Lynn D. Celotti. "How Much Influence Do (/and Can) Educational Administrators Have on Classrooms?" Phi Delta Kappan, LXI (March, 1980), 471-473.

Dinnan, James A., and Lawrence E. Hafner. "Reading Interests and Abilities of College Students," Reading Improvement, (Winter, 1970), 63-65.

Doyle, Walter. "Education for All: The Triumphs of Professionalism," Perspectives on Curriculum Development 1776-1976, ed. O. L. Davis (Washington: Association for Supervision and Curriculum Development, 1976).

Drummond, William H., and Gordon D. Lawrence. "A Letter to Harry on Site-Specific Inservice Education," Theory Into Practice, XVII (June, 1978), 272-278.

Dunathan, Arni T. "Midwest Schools Face Shortages of Good Teachers," Phi Delta Kappan, LXI (October, 1979), 121-123.

Dwyer, Margaret S. "Mastering Change in Education: Involving Others in Educational Change," Educational Technology, XVI (December, 1976), 40-41.

________. "Mastering Change in Education: Understanding the Anxieties Created by Change," Educational Technology, XVII (January, 1977), 54-56.

Ehrlich, W. "Role of the University Scholar in the Training of High School Teachers," College and University Teacher, XXV (Autumn, 1977), 233-236.

Eicher, Charles E., and Robert W. Wood. "Reading Habits of Elementary School Teachers and Principals," Education (Summer, 1977), 385-391.

Elliott, Stanley. "Tuition by Post: An Historical Perspective," Teaching at a Distance, XI (May, 1978), 12-16.

Embry, Dennis D. "Disseminating Research Findings: A Blueprint for Affecting Educational Research and Practice," Educational Technology, XIX (March, 1979), 25-29.

English, Fenwick W. "Management Practice as a Key to Curriculum Leadership," Educational Leadership, XXXVI (March, 1979), 408-413.

Erickson, Donald A. "Research on Educational Administration," Educational Researcher, VIII (March, 1979), 9-14.

Evans, R. L., and A. Kilgore. "Syracuse University Teaching Center: A Model for Preservice-Inservice Development," Phi Delta Kappan, LIX (April, 1978), 539-541.

________. "For High School Chemical Education: A New Agenda," Journal of Chemical Education, LV (October, 1978), 615.

Frederick, Sally, and Barry Kincaid. "What Beginning English Teachers Need to Know about Keeping up Professionally: Boiler Room Blues, or Beyond the Price of Day-Old Bread," English Education, X (May, 1979), 261-265.

Frye, Charles M. "Who Runs the Schools?" Newsweek, September 3, 1979, 13.

Gallo, Donald R. "Journal Reading and Selected Measures of Teaching Effectiveness," Research in the Teaching of English (Spring, 1970), 45-50.

Gallup, George H. "The First Ten Years: Trends and Observations," A Decade of Gallup Polls of Attitude toward Education 1969-1978, ed. S. M. Elam (Bloomington: Phi Delta Kappan, 1978), 1-5.

Gehrke, Nathalie J. "Renewing Teachers' Enthusiasm: A Professional Dilemma," Theory Into Practice, XVIII (June, 1979), 188-193.

Gephart, William J. "Practical Applications of Research," Practical Applications of Research, I (March, 1979), 1-2.

Gerber, John. "The Roles of the Chairman," ADE Bulletin, LX (February, 1979), 1-8.

Geyer, John J. "Comprehensive and Partial Models Related to the Reading Process," Reading Research Quarterly, VII (Summer, 1972), 541-587.

Goodlad, John I. "Can Our Schools Get Better?" Phi Delta Kappan, LXI (January, 1979), 342-374.

Grant, Carl A. "Classroom Socialization: The Other Side of a Two-Way Street," Educational Leadership, XXXVI (April, 1979), 470-474.

Guthrie, John T. "Why People (Say They) Read," Reading Teacher, XXXII (March, 1979), 752-755.

Halpin, Andrew. "Change --The Mythology," Theory Into Practice, VIII (February, 1969), 3-10.

________. "How Leaders Behave," Organizations and Human Behavior: Focus on Schools, eds. F. D. Carver and T. J. Sergiovanni (New York: McGraw-Hill, 1969).

Harelik, J. H., P. M. Johnston, N. P. Rivers, and M. R. Ryan. "Pharmacist and Physician Evaluation of Drug Information Sources," American Journal of Hospital Pharmacy, XXXII (June, 1975), 594-597.

Harmer, Earl W. "Veteran Teachers: Old Myths and New Realities," Phi Delta Kappan, LX (March, 1979), 536-538.

________. "Veteran Teachers and Curriculum Development," Phi Delta Kappan, LVII (June, 1977), 751-752.

Harris, Ben M., and Leonard A. Valverde. "Supervisors and Educational Change," Theory Into Practice, XV (October, 1976), 267-273.

Harty, H. "Field-Based Professional Development Complex: One Approach to Future Pre-Service/In-Service Teacher Preparation," Peabody Journal of Education, LV (July, 1978), 337-345.

Heckman, P., and N. Schmidt. "Teaching to Learn; Learning as Teaching," Thrust, VII (March, 1978), 17-19.

Hinely, Reg, and Gerald Ponder "Theory, Practice, and Classroom Research," Theory Into Practice, XVIII (June, 1979), 135-137.

Hipple, Theodore W., and Thomas R. Giblin. "Professional Reading of Teachers Questionnaire," Research in the Teaching of English, V (Fall, 1971), 153-164.

Hoffman, Charlotte K. "Teacher Training Inside Out," American Education, IV (August/September, 1979), 6-11.

Houts, Paul, T. Koerner, and R. J. Krajewski. "View from the Bridge: A Discussion," Theory Into Practice, XVIII (February, 1979), 2-4.

Howey, Kenneth, and Bruce Joyce. "A Data Base for Future Directions in Inservice Education," Theory Into Practice, XVII (June, 1978), 206-211.

Hughes, Andrew S., and Kimberly Johnston-Doyle. "What Do Teachers Read? Professional Reading and Professional Development," Education Canada, XVIII (Fall, 1978), 42-45.

Hunkins, Francis P. "Building Curriculum: Influences and Mechanisms," Perspectives on Curriculum Development 1776-1976, ed. O. L. Davis (Washington: Association for Supervision and Curriculum Development, 1976).

Hunt, David E. "Inservice Training as Persons-in-Relation," Theory Into Practice, XVII (June, 1978), 239-244.

Kane, Ralph J. "The Mindless Box: The Case against the American Classroom," Phi Delta Kappan, LX (March, 1979), 503-503.

Kersten, Thomas A., and Davis Drost. "Professional Publications: Who Are the Readers?" NASSP Bulletin, (November, 1980), 94-96.

Klein, M. Frances, Kenneth A. Tye, and J. E. Wright. "A Study of Schooling: Curriculum," Phi Delta Kappan, LXI (December, 1979), 244-248.

Koehler, Virginia. "The Future of Teacher Preparation and Research on Teaching," Theory Into Practice, XVIII (June, 1979), 200-203.

Krejcie, Robert V., and D. W. Margan. "Determining Sample Size for Research Activities," Educational and Psychological Measurement, XXX (1970), 607-610.

Kuhlman, Edward. "Graduate School Programs as Reinforcers of Professional Norms," Clearing House, LII (May, 1979), 436-438.

Lawrence, Gordon, and Jan Branch. "Peer Support System as the Heart of Inservice Education," Theory Into Practice, XVII (June, 1978), 245-247.

Lawson, Hal A. "Physical Education and Sport in the Black Community: The Hidden Perspective," The Journal of Negro Education, XLVIII (Spring, 1979), 187-195.

LeGrand-Brodsky, Kathryn. "Hope for Reading in America: Practically Everyone Reads," Reading Teacher, XXXII (May, 1979), 947-949.

Lewis, Patricia F. "Professional Literature: Who Reads It?" Training and Development Journal, VI (September, 1977), 8-11.

Lickona, Thomas. "Helping Teachers Become Moral Educators," Theory Into Practice, XVII (June, 1978), 258-266.

Lieberman, Ann. "Political and Economic Stress and the Social Reality of Schools," Teachers College Record, LXXIX (December, 1977), 259-267.

________, ed. "Staff Development: New Demands, New Realities, New Perspectives," Teachers College Record, LXXX (September, 1978), 1-201.

________, and Lynne Miller. "The Social Realities of Teaching," Teachers College Record, LXXX (September, 1978), 54-68.

Lightfoot, Sara L., and J. V. Carew. "Individuation and Discrimination in the Classroom," American Journal of Orthopsychiatry, XLVI (July, 1976), 401-415.

Likert, Rensis, and R. Lippitt. "The Utilization of Social Science," Research Methods in the Behavioral Sciences,II eds. L. Festinger and D. Katz (New York: Dryden, 1963).

"Like to Write?" Thrust, IX (October, 1979), 26.

Loucks, Susan, and Harold Pratt. "A Concerns-Based Approach to Curriculum Change," Educational Leadership, XXXVII (December, 1979), 212-215.

Luce, Terrence S., and Dale M. Johnson. "Rating of Educational Journals," Educational Researcher, VII (November, 1978).

McCarthy, Martha M., G. D. Kuh, and J. M. Beckman. "Characteristics and Attitudes of Doctoral Students in Educational Administration," Phi Delta Kappan, LXI (November, 1979), 200-203.

McIntire, Kenneth. "Training Programs for Principals," Theory Into Practice, XVIII (February, 1979), 28-32.

McLaughlin, Milbrey, and Paul Berman. "Retooling Staff Development in a Period of Retrenchment," Educational Leadership, XXXV (December, 1977), 191-194.

________, and David D. Marsh. "Staff Development and School Change," Staff Development: New Demands, New Realities, New Perspectives, eds. Ann Lieberman and L. Miller (New York: Teachers College, 1979).

McWilliams, Lana J. "Riding and Reading," Journal of Reading, XXII (January, 1979), 337-339.

Mallan, John T. "Philodoxy: The Promise of Inservice," Theory Into Practice, XVII (June, 1978), 218-228.

Mangers, Dennis. "Need for Administrator Training Voiced by Legislative Task Force," *Thrust*, VIII (March, 1979), 4-8.

Mann, Dale. "The Politics of Inservice," *Theory Into Practice*, XVII (June, 1978), 212-217.

May, Lola June. "Change and Changelessness," *Arithmetic Teacher*, XXVIII (May, 1980), 4-5, 37.

Medley, Donald M. "The Effectiveness of Teachers," *Research on Teaching: Concepts, Findings, and Implications*, eds. P. L. Peterson and H. J. Walberg (Berkeley: McCutchan, 1979), 11-27.

Michael, William B. "Teacher Personnel: A Brief Evaluation of the Research Reviewed," *Review of Educational Research*, XXXIII (1963), 443

Mikulecky, Larry. "A Changing View of Literacy," *Reporting on Reading*, V (April, 1979), 1, 4-5.

Miller, Lynne. "BTES: Implications for Staff Development," *BTES Newsletter*, II (March, 1979), 13-16.

________, and T. E. Wolf. "Staff Development for School Change: Theory and Practice," *Teachers College Record*, LXXX (September, 1978), 140-156.

Miller, William C. "Can a Principal's Improved Behavior Result in Higher Pupil Achievement?" *Educational Leadership*, XXXIII (February, 1976), 336-338.

Morin, Andre. "An Innovator's Odyssey: How to Become a Thoughtful Change Agent," *Educational Technology*, X (November, 1975), 42-45.

Mour, Stanley. "Do Teachers Read?" *Reading Teacher*, XXX (January, 1977), 397-401.

Mueller, Doris L. "Teacher Attitudes toward Reading," *Journal of Reading*, XVII (December, 1973), 202-205.

Mulholland, Robert E. "Television, Books, and Teachers," *English Education*, IX (October, 1978), 3-8.

Mullican, Frank, and Len Ainsworth. "The Principal as Instructional Leader," *Theory Into Practice*, XVIII (February, 1979), 33-38.

"National Association of Secondary School Principals Curriculum Report," IX (November, 1979), 1-8.

"National Center for the Study of Professions," *Professions Education Researcher*, I (June, 1979), 1-20.

Novotney, Patricia B. "The Principal as an Instructional Leader," Educational Leadership, XXXVI (March, 1979), 405-406.

Nunn, Clyde Z. "Readership and Coverage of Science and Technology in Newspapers," Journalism Quarterly, LVI (Spring, 1979), 27-30.

Orlosky, Donald, and B. Othanel Smith. "Educational Change: Its Origins and Characteristics," Phi Delta Kappan, LIV (March, 1972), 412-414.

Patterson, Jerry L., and Theodore J. Czajkowski. "Implementation: Neglected Phase in Curriculum Change," Educational Leadership, XXXVII (December, 1979), 204-206.

Pine, Gerald J., and Angelo V. Boy. "Theory as a Guide to Administrative Behavior," NASSP Bulletin, LXIII (March, 1979), 32-38.

Pipho, Chris. "The NAEP Conference on Minimum Competency Testing," Phi Delta Kappan, LXI (October, 1979), 123.

Raugh, P. S. "Helping Teacher: A Model for Staff Development: Instructional Associate Program," Teachers College Record, LXXX (Summer, 1978), 157-171.

Reynolds, Joseph. "Teachers, You Don't Need to Burn Out," Christian Science Monitor, June 13, 1979.

Rogers, Everett M. "What Are Innovators Like?" Change Processes in the Public Schools (Eugene: Oregon University, 1965).

Rosenblith, Walter. "A Note on Engineering and the Other Professions," Daedalus, CIX (Winter, 1980), 185-187.

Rosenshine, Barak, and Linda Meyers. "Staff Development for Teaching Basic Skills," Theory Into Practice, XVII (June, 1978), 267-271.

Ryan, Kevin, J. Johnston, and Katherine Newman. "An Interview with Ralph Tyler," Phi Delta Kappan, LVIII (March, 1977), 544-547.

Sergiovanni, Thomas J. "Is Leadership the Next Great Training Robbery?" Educational Leadership, XXXVI (March, 1979), 388-394.

Sharon, Amiel T. "What Do Adults Read?" Reading Research Quarterly, IX (1973-74), 148-169.

Shaver, James P. "The Productivity of Educational Research and the Applied-Basic Research Distinction," *Educational Researcher*, LXXXI (January, 1979), 3-9.

Silverman, Robert J. "Commitments of Editors in Education," *Educational Forum*, XLIV (January, 1980), 231-241.

Slovik, Paul, B. Fischhoff, and S. C. Lichtenstein. "Cognitive Processes and Societal Risk Taking," *Cognition and Social Behavior*, eds. J. S. Carroll and J. W. Payne (New York: Halsted, 1976), 165-184.

Sontag, Marvin. "Attitudes toward Education and Perception of Teacher Behaviors," *American Educational Research Journal*, V (1968), 385-402.

"Source Journal Index." *Current Index to Journals in Education*, XI (October, 1979).

Spencer, M. "Some Agents of Science Curriculum Change," *Education in Science*, LXXXII (April, 1979), 22-23.

"Status Report: Pre-College Science, Mathematics, and Social Studies," *EPIEgram: Materials*, VII (April, 1979), 1-3.

Steinberg, Heinz. "Social Integration as the Source of Motivation to Read among Adults," *Journal of Reading*, XXII (May, 1979), 745-747.

Sticht, Thomas G. "The Development of Literacy," *Curriculum Inquiry*, VIII (1978), 341-348.

Summers, Edward G. "Information Characteristics of *The Journal of Reading* (1959-1977)," *Journal of Reading*, XXIII (October, 1979), 39-49.

Summers, J. A., ed. "Renewal of Secondary Teachers: A Symposium," *Contemporary Education*, XLIX (Spring, 1978), 132-178.

Tannenbaum, Robert, and Warren Schmidt. "How to Choose a Leadership Pattern," *Harvard Business Review*, XXXV (1957).

"Top Executives Who Can't Read." *Stockton (California) Record*, April 30, 1979.

"Trends in Education." *EPIEgram Materials*, VI (February, 1979), 3.

Vann, Allan. "Can Principals Lead in Curriculum Development?" *Educational Leadership*, XXXV (March, 1979), 404-406.

Van Til, William. "Educational Technology and Professional Practice," *Curriculum: Quest for Relevance*, ed. William Van Til (New York, Houghton Mifflin, 1971), 298-305.

Wandt, Edwin. "Evaluating Educational Research," *A Cross-Section of Educational Research*, ed. Edwin Wandt (New York: McKay, 1965).

Weiss, Carol H. "What America's Leaders Read," *Public Opinion Quarterly*, XXXVIII (September, 1974), 1-22.

Wiggins, Thomas. "The Illusion of Leadership in Education," *College Student Journal*, XII (Winter, 1978), 393-397.

Williamson, John A. "Biographical Factors and Teacher Effectiveness," *Journal of Experimental Education*, XXXVII (Spring, 1969), 85-88.

Williamson, Mildred C. "Staff Development for the School Nurse Practitioner," *Journal of School Health*, IX October, 1978), 471-473.

Witherell, Carol S., and V. L. Erickson. "Teacher Education as Adult Development," *Theory Into Practice*, XVII (June, 1978), 229-238.

Yarger, Sam, and Gwendolynne P Yarger. "And So We Asked Ourselves --about Teacher Centers," *Theory Into Practice*, XVII (June, 1978), 248-257.

Young, Jean Helen. "Teacher Participation in Decision Making: An Organizational Dilemma," *Curriculum Inquiry*, IX (Summer, 1979), 113-127.

C. UNPUBLISHED MATERIALS AND UNCLASSIFIED DOCUMENTS

Aliotti, Nicholas C. "Sex Differences in Reading: A Biological Explanation." Paper presented at the Annual Meeting of the Western Psychological Association, San Francisco, California, April 22, 1978.

Anders, Patricia L., and Judy Nichols Mitchell. "Comparing Elementary and Secondary Teachers: Reading Attitudes, Awareness, and Abilities." Unpublished manuscript, University of Arizona, Tucson, 1978.

Beebe, Von Nieda. "Innovation and Local Invention: The Process of Change and Participation by Professional Employees." Unpublished Doctoral dissertation, Columbia University, 1970.

Burke, James. "The Trigger Effect," Connections (Public Broadcasting System, 1979).

California State Assembly Education Committee Task Force. "The School Principal: Recommendations for Effective Leadership," Sacramento, 1978.

Duffey, Robert V. "Elementary School Teachers' Reading." Paper presented at the Annual Meeting of the College Reading Association, Bethesda, Maryland, October, 1974.

Ferguson, D. Hugh. "The Role of the High School Principal in Curriculum Development and the Improvement of Instruction." Summary of Doctoral dissertation, Temple University, 1975.

Festersen, John C. "The Role of the Department Chairman in Four Selected Comprehensive High Schools in San Joaquin County." Unpublished Doctoral dissertation, Berkeley, University of California, 1968.

Foster, Richard L. "Leadership, Management, and Change." Address at the IDEA Fellows Program, Claremont Colleges, 1979. Tape available at Education Services, Lincoln Unified School District, Stockton, California.

Fulks, Danny Grayson. "The Utilization of Periodical Literature by Selected Public School Superintendents." Unpublished Doctoral dissertation, University of Tennessee, 1968.

Gallagher, James M. "How to Make Better Use of Department Chairmen." Paper presented at the Annual Meeting of the National Association of Secondary School Principals, New Orleans, January, 1977.

Hajda, Jan. "An American Paradox: People and Books in a Metropolis." Unpublished Doctoral dissertation, Chicago, University of Chicago, 1963.

Harris, Ben M. Strategies for Instructional Change -- Promising Ideas and Perplexing Problems. U.S., Educational Resources Information Center, ERIC Document ED 013 799, 1966.

Ilika, Joseph. "A Critical Review of the Teacher Readership Characteristics Research and the Implications for Performance-Based Teaching." Paper presented at the Annual Meeting of the International Reading Association, New Orleans, May, 1974.

Kirkland, Genevieve Gale. "The Role of the Department Head in Large Public Senior High Schools." Unpublished Doctoral dissertation, University of Colorado, 1978.

Leeper, Robert R. "Professional Content of Selected State Education Association Journals." Unpublished Doctoral dissertation, Columbia University, 1950.

Levinsohn, Florence Hamlish. "In Defense of the Status Quo." Paper presented at the Annual Meeting of the American Educational Research Association, New York City, April, 1977.

Lieberman, Ann. "The Effects of Principal Leadership on Teacher Morale, Professionalism and Style in the Classroom." Unpublished Doctoral dissertation, Los Angeles, University of California, 1969.

Lindsey, Alfred Junior. "A Program of Professional Readings for Secondary English Teachers Who Teach in Illinois Schools with Fewer than 350 Students." Unpublished Doctoral dissertation, Urbana-Champaign, University of Illinois, 1969.

McKean, Robert, and Myrle Hemenway. *Model Position Description for the Junior High School Department Head*. U.S., Educational Resources Information Center, ERIC Document ED 132 690, 1975.

McNally, Harold J. "Who's Changing What and Why?" Address at the Annual Meeting of the National Association of Elementary School Principals, Anaheim, May, 1974.

Mangers, Dennis. "What's Happening to Leadership Training?" Address at a workshop of the Association of California School Administrators, San Jose, January, 1979. Audio-tape available at Education Services, Lincoln Unified School District, Stockton, California.

Marburger, Carl L. *The Role of Teachers and Community Workers in Depressed Areas*. U.S., Educational Resources Information Center, ERIC Document ED 002 530, October, 1964.

Mayer, Martin. "Rising Expectations from a Shrinking Enterprise." Address at the IDEA Fellows Program, Claremont Colleges, 1979. Audio-tape available at Education Services, Lincoln Unified School District, Stockton, California.

Merrill, Richard James. "The Role of the High School Principal Regarding Change in Classroom Practice: An Exploratory Study." Unpublished Doctoral dissertation, Columbia University, 1960.

Ohanian, Arthur Lawrence. "The Role of the High School Principal in the Improvement of Instruction." Unpublished Doctoral dissertation, University of Northern Colorado, 1967.

Papalia, Anthony. The Department Head: A Survey of Duties and Responsibilities. U.S., Educational Resources Information Center, ERIC Document ED 042 389, 1970.

Parsey, John Michael. "Educating the Educator: A Study of the Effects of Motivated Reading in Professional Journals." Unpublished Doctoral dissertation, University of Chicago, 1958.

Pohl, M. L. "A Study of the Teaching Activities of the Nursing Practitioner." Unpublished Doctoral dissertation, Columbia University, 1963.

Salmon, Webb. "The Department Head Who Is Indeed." Paper presented at the Annual Meeting of the Florida Council of Teachers of English, Orlando, October, 1977.

Shapiro, Arthur S. "Conceptions of the Supervisory Role of the Department Chairman in the Public High School." Unpublished Doctoral dissertation, University of Chicago, 1966.

Smith, Annie Lou. "A Study of English Methods Courses in Selected Tennessee Colleges and Universities." Unpublished Doctoral dissertation, University of Tennessee, 1969.

Weaver, W. Phillips. "Teachers' Reading of the News." Paper presented at the Maryland Reading Institute, Silver Springs, October, 1968.

Weese, Keith Coolidge. "An Investigation of the Impact of Two Different Types of Inservice Professional Reading Programs on the Perceptions of Teachers in Disadvantaged Schools." Unpublished Doctoral dissertation, Urbana-Champaign, University of Illinois, 1969.

Wilkins, William D. "Periodicals in Education." Unpublished Doctoral dissertation, Northwestern University, 1941.

Work of the Business and Distributive Education Department Chairman. U.S., Educational Resources Information Center, ERIC Document ED 134 732, 1968.

APPENDIX A-1

①

HIGH SCHOOL DEPARTMENT LEADERSHIP:

Sources of Educational Information and Change in Classroom Practice

Please respond to each statement by checking the appropriate cell or filling in the blank line. The cell numbers in parentheses are only data-processing aids and have no other meaning.

☐ (01-16)

I HAVE INSTRUCTIONAL LEADERSHIP RESPONSIBILITY FOR THE AREA(S) OF

ENGLISH	MATH	PHYSICAL EDUCATION	SCIENCE	SOCIAL SCIENCE	OTHER(S)
☐	☐	☐	☐	☐	☐
(17)	(18)	(19)	(20)	(21)	(22)

I HAVE SERVED IN THIS POSITION FOR

1-5 YEARS	6-10 YEARS	11-15 YEARS	16+ YEARS
☐	☐	☐	☐
(23)	(24)	(25)	(26)

THE SETTING FOR MY SCHOOL IS

URBAN	SUBURBAN	RURAL
☐	☐	☐
(27)	(28)	(29)

I RATE MY PERFORMANCE WITHIN THE LAST TWO YEARS IN KEEPING UP WITH INNOVATION AND THE GROWTH OF KNOWLEDGE IN MY FIELD AS

POOR	FAIR	GOOD	EXCELLENT
☐	☐	☐	☐
(30)	(31)	(32)	(33)

I RATE THESE MEANS OF SHARING CURRICULUM INFORMATION WITH MY COLLEAGUES

	VERY LOW	LOW	HIGH	VERY HIGH
Circulated copies of journal articles	☐ (88)	☐ (89)	☐ (90)	☐ (91)
Circulated copies of other materials	☐ (92)	☐ (93)	☐ (94)	☐ (95)
Word-of-mouth/discussions	☐ (96)	☐ (97)	☐ (98)	☐ (99)
Memoranda	☐ (100)	☐ (101)	☐ (102)	☐ (103)
Other (what?): ____________________	☐ (104)	☐ (105)	☐ (106)	☐ (107)

Please continue →

⑥

APPENDIX A-2

③

WITHIN THE LAST TWO YEARS, THE DEGREE OF MY USE OF PROFESSIONAL JOURNALS FOR THE CONTINUING IMPROVEMENT OF MY CLASSROOM PRACTICE HAS BEEN	VERY LOW	LOW	HIGH	VERY HIGH
	☐ (52)	☐ (53)	☐ (54)	☐ (55)

HERE I LIST THE JOURNALS I READ THAT HAVE *THE MOST DIRECT OR PRACTICAL VALUE* FOR USE IN MY OWN CLASSROOM

(56) ____________________

(57) ____________________

(58) ____________________

(59) ____________________

(60) ____________________

HERE I LIST THE JOURNALS THAT I READ BUT THAT HAVE *LESS DIRECT OR PRACTICAL VALUE* FOR USE IN MY OWN CLASSROOM

(61) ____________________

(62) ____________________

(63) ____________________

(64) ____________________

HERE I CHARACTERIZE AND LIST THE CHANGES I HAVE MADE IN MY CLASSROOM PRACTICE WITHIN THE LAST TWO YEARS

CHANGES IN PRACTICE Examples: "discipline," "competence testing," "new games"	CHANGE SOURCE/INFLUENCE Examples: Name of journal, "professional meeting," "teacher colleague"	CHECKED If Change "Worked"
(65) ____________________	(66) ____________________	(67) ☐
(68) ____________________	(69) ____________________	(70) ☐
(71) ____________________	(72) ____________________	(73) ☐
(74) ____________________	(75) ____________________	(76) ☐
(77) ____________________	(78) ____________________	(79) ☐

WHEN I READ EDUCATION JOURNALS, I USUALLY DO SO (BECAUSE) ____________________

____

____

④ ____________________ (80)

APPENDIX A-3

5)

AT PRESENT, ENROLLMENT IN MY SCHOOL IS

DECLINING	STABLE	INCREASING
☐ (81)	☐ (82)	☐ (83)

I AM		
	FEMALE	☐ (84)
	MALE	☐ (85)

I HAVE CHECKED BOX #86 ONLY IF THE FOLLOWING STATEMENT IS TRUE FOR ME.

☐ (86) "I attend professional meetings and/or discuss education with my colleagues and/or take graduate courses and/or have other professional growth experiences --but I read little or nothing in education journals."

IF I CHECKED BOX #86 : I usually read little or nothing in the journals because ________________

____

____

____

____ (87)

WITHIN THE LAST TWO YEARS, I HAVE	YES	NO
Designed or helped design one or more new courses of study or classroom units	☐ (34)	☐ (35)
Supervised one or more student teachers or beginning teachers	☐ (36)	☐ (37)
Initiated one or more innovations or changes in my own classroom practice	☐ (38)	☐ (39)

I LIST HERE THE PROFESSIONAL ORGANIZATIONS TO WHICH I HAVE BELONGED WITHIN THE LAST TWO YEARS. I CHECK THOSE FOR WHICH A JOURNAL COMES WITH MY MEMBERSHIP: *

(40)____________________ (41) ☐ *

(42)____________________ (43) ☐

(44)____________________ (45) ☐

(46)____________________ (47) ☐

I CONSIDER MY OWN READING ABILITY TO BE	POOR	FAIR	GOOD	EXCELLENT
	☐ (48)	☐ (49)	☐ (50)	☐ (51)

②

APPENDIX A-4

⑦

YES, I'D LIKE TO BE SENT A COPY OF YOUR FINDINGS. ☐ (108)

YOUR RESPONSES ARE RESPECTED INDIVIDUALLY AS PROFESSIONAL CONFIDENCES.

THE CODE NUMBER IS NECESSARY FOR CROSS-TABULATION WITH GROUP DATA.

☐

Educational Services
Lincoln Unified School District
2010 West Swain Road
Stockton, CA 95207

EDUCATIONAL SERVICES
LINCOLN UNIFIED SCHOOL DISTRICT
2010 WEST SWAIN ROAD

STOCKTON, CA 95207

Please fasten here with tape

APPENDIX B.1

UNIVERSITY OF THE PACIFIC

SCHOOL OF EDUCATION
Stockton, California 95211 Founded 1851

DEPARTMENT OF
EDUCATIONAL ADMINISTRATION

Please give us your permission to ask high school department heads in your district to participate in a scholarly, questionnaire-based, statewide research study which will be conducted in the fall.

Your department heads may help supervise 25 or 30 teachers --or only one or two. Whether they can help your principals provide instructional leadership depends on where these lead teachers get their information about what's happening in their fields of study. A data base on those information sources does not now exist and will benefit planners such as you.

High schools in your district* have been identified in a stratified sample to represent key segments of the state high school population. Data from the study will remain anonymous. In no way will individuals, schools, or districts be identified or identifiable in the published study.

With your permission we'll contact the school-level leadership next. Your signing and mailing the enclosed postage-paid card will permit progress of the study in your district. Will you please sign and mail the card today?

Cordially and with great appreciation,

Jonathan Pearce

*

encls. (We'll be happy to send you a copy of our findings!)

APPENDIX B.2

UNIVERSITY OF THE PACIFIC

SCHOOL OF EDUCATION

Stockton, California Founded 1851
95211

DEPARTMENT OF
EDUCATIONAL ADMINISTRATION

Please give us your permission to ask high school department heads in your district to participate in a scholarly, questionnaire-based, statewide study which will be conducted next fall.

Your department heads may help supervise 25 or 30 teachers --or one or two. Whether they can help your principal provide the expected instructional leadership depends on where those lead teachers get their information about what's happening in their fields of study. A data base on the information sources of department heads does not now exist and will benefit planners such as you.

A high school in your district* has been identified in a stratified sample to represent a key segment of the state high school population. Data from the study will remain anonymous. In no way will individuals, schools, or districts be identified or identifiable in the published study.

With your permission we'll contact the school-level leadership next. Your signing and mailing the enclosed postage-paid card will permit progress of the study in your district. Will you please sign and mail the card today?

Cordially and with great appreciation,

Jonathan Pearce

*

encls. (Of course we'll send you a copy of our findings!)

APPENDIX C

Jonathan: You may ask schools in my district to participate in the statewide study of Department Head Information Sources. I understand that responses will be sought from

☐

Supt./Designee Date

○ Yes, I'd like a copy of the findings on completion of the study.

Jonathan Pearce:

You have my permission to conduct your High Schoo. Department Head Information Sources study in my district. I understand that you guarantee the anonymity of the survey information and that responses will be sought from

☐

Supt./Designee Date

○ Yes, I'd like a copy of your statewide findings on completion of the study.

APPENDIX D

Please give us your permission to ask high school department heads in your district to participate in a scholarly, questionnaire-based, statewide research study which will be conducted in the fall.

Your department heads may help supervise 25 or 30 teachers --or only one or two. Whether they can help your principals provide instructional leadership depends on where these lead teachers get their information about what's happening in their fields of study. A data base on those information sources does not now exist and will benefit planners such as you.

High schools in your district* have been identified in a stratified sample to represent key segments of the state high school population. Data from the study will remain anonymous. In no way will individuals, schools, or districts be identified or identifiable in the published study.

With your permission we'll contact the school-level leadership next. Your signing and mailing the enclosed postage-paid card will permit progress of the study in your district. Will you please sign and mail the card today?

Cordially and with great appreciation,

Jonathan Pearce

*

encls. (We'll be happy to send you a copy of our findings!)

APPENDIX F

UNIVERSITY OF THE PACIFIC
BUREAU OF EDUCATIONAL RESEARCH AND FIELD SERVICES
SCHOOL OF EDUCATION Stockton, California Founded 1851
95211

May 9, 1980

Dear Fellow Educator:

I am pleased to support the research being done by Jonathan Pearce on the effect of professional input on classroom teaching strategies. The information derived from this study will provide guidelines for use and/or improvement for teachers, administrators, and all others who would have an impact on what happens in learning situations.

Your candid responses are crucial to having complete information available for analysis. Your participation is solicited earnestly.

Yours sincerely,

Michael B. Gilbert
Director

APPENDIX G

Please give us your permission to ask your high school department heads to participate next fall in a statewide scholarly study of the information sources of high school department heads.

Whether your department heads are effective in helping you provide instructional leadership depends on where they get information on what's happening in their fields. A data base on those information sources does not now exist and will benefit planners such as you.

Your high school* has been identified in a stratified sample to represent a key segment of California high schools for the study. Data from the study will remain anonymous. Individuals, schools, or districts will not be identified or identifiable in the published study.

In order to enable us to contact certain of your department heads (or those teachers who perform that function for you, whatever the title) please enter on the enclosed post-card the names of the persons whom you will have serve as head of each of the listed high school departments during the 1980-81 school year. Please also note the name of your secretary. Your returning the completed card will give us your permission to send postage-paid questionnaires in the fall for distribution to your department heads.

Will you please return the card today?

Cordially and with great appreciation,

Jonathan Pearce

*

encls. (Of course we'll send you a copy of our findings!)

APPENDIX H

Jonathan: Listed here are those "very influential teachers" who will serve as my department heads (or *equivalent*) in 1980-81:

English: ____________________ Math: ____________________

P.E.: ____________________ Science: ____________________

Soc Sci: ____________________ IndArts: ____________________

Music: ____________________ Business: ____________________

My Secretary: ____

____
Principal

APPENDIX I

UNIVERSITY OF THE PACIFIC

SCHOOL OF EDUCATION Stockton, California Founded 1851
95211

DEPARTMENT OF
EDUCATIONAL ADMINISTRATION

September 1980

Here are the questionnaires on Professional Sources of Information that I promised you last spring for delivery now. Each carries its own explanation.

Thanks to your cooperation, in nearly all cases each questionnaire is personally addressed. If the names on the card that your returned were marked-over in the mail or otherwise were unavailable, we addressed the questionnaires in care of subject-areas for your distribution to the teacher you choose in each area. (Notice that not all subject-matter areas are represented in this study.)

Will you now please distribute each questionnaire to the individual named --or (if the questionnaire is not personally addressed) to the teacher who is highly influential in the curriculum area noted on each such questionnaire? Will you then please urge each recipient to complete and respond quickly? I deeply appreciate your professional assistance in these efforts!

Cordially,

Jonathan Pearce
(209) 478-2552 Collect

This project is endorsed by ACSA

Association of California School Administrators

As you may know, endorsement by this organization signifies that ACSA has analyzed the purposes, objectives, and methodology of the project according to a rigorous procedure and has evaluated the project as worthy of the support and participation of education professionals.

APPENDIX J

July 9, 1980

Jonathan Pearce
Educational Services
Lincoln Unified S.D.
1956 Stanton Way
Stockton, Calif. 95207

Dear Mr. Pearce:

This is to inform you that upon the recommendation of the research sub-committee of the ACSA Research, Evaluation and Accreditation Committee, we are pleased to endorse your study "Influence of Education Journals on Classroom Practice as Perceived by Department Heads in California Public High Schools."

We hope that endorsement by the Association of California School Administrators proves helpful and we wish you success with your proposed dissertation.

Sincerely,

Ferd J. Kiesel
Interim Executive Director

FJK/llh

Association Of California School Administrators 1575 Old Bayshore Hwy, Burlingame, CA 94010 (415) 692-4300

4020 Birch St., Suite 111, Newport Beach, CA 92660
(714) 975-0621 (213) 687-9788
1517 L Street, Sacramento, CA 95814 (916) 444-3216
4470 Park Blvd., Suite 102, San Diego, CA 92116 (714) 295-2117

Officers
Richard T. Cooper, President
Robert D. Mohr, Vice President
Ernest D. Moretti, President-elect
Ron Stewart, Past President

Board of Directors
Lewie Burnett
Emma Hulett
George T. Hurley
Leeds R. Lacy, Jr.
Mary H. Lewis
Gary Olson
Barbara Patterson
Don Slezak
Elizabeth Tunison

UNIVERSITY OF THE PACIFIC
Stockton, CA 95211

Dear John Johnson,

September 1980

Please participate in this statewide study of information sources of high school subject-area instructional leaders. You have been identified as such a person. This study is endorsed by leading professional organizations. Your responses are expected to have practical impact with diverse audiences. **This study is worth your valuable time.**

In responding to the questionnaire, you will be part of a very specialized sample, speaking for the department instructional leaders of California's public high schools. **Your participation is important.**

Colleagues who helped refine the questionnaire say that you will be able to answer all items in less than 15 minutes. **Your responses are confidential.**

You can help us meet data processing and publication deadlines by completing **and mailing the questionnaire within ten days.**

With many thanks,

Jonathan Pearce

Jonathan Pearce

UNIVERSITY OF THE PACIFIC
Stockton, CA 95211

Dear Science Department Head,

September 1980

Please participate in this statewide study of information sources of high school subject-area instructional leaders. You have been identified as such a person. This study is endorsed by leading professional organizations. Your responses are expected to have practical impact with diverse audiences.

This study is worth your valuable time.

In responding to the questionnaire, you will be part of a very specialized sample, speaking for the department instructional leaders of California's public high schools. **Your participation is important.**

Colleagues who helped refine the questionnaire say that you will be able to answer all items in less than 15 minutes. **Your responses are confidential.**

You can help us meet data processing and publication deadlines by completing **and mailing the questionnaire within ten days.**

With many thanks,

Jonathan Pearce

Jonathan Pearce

SCIENCE

APPENDIX L

RE the questionnaires on Professional Sources
of Information that I sent you about a week ago

By now, you've distributed those questionnaires to the department heads or other influential teachers in English, social science, physical ed., science, and math (and maybe one other).

The questionnaire does take some time and effort to complete. As the sample for this study is stratified, the responses from your staff are extra, super important.

Would you please do me the great favor of polling the recipients, asking those who haven't done so if they might now complete and mail the questionnaire quickly? Thank you for all your help and consideration!

Cordially,

Jonathan Pearce

APPENDIX M

APPENDIX N

UNIVERSITY OF THE PACIFIC

SCHOOL OF EDUCATION
Stockton, California Founded 1851
95211

DEPARTMENT OF
EDUCATIONAL ADMINISTRATION

5 December 1980

A colleague identified you as an instructional leader in your school. Your opinion and example profoundly influence what young people learn. You also influence your colleagues.

But what sources of information influence you and your classroom practice? For example, does any "education journal" affect what you do as a professional teacher? Incredibly, almost nothing reliable is known about such matters as they relate to high school educators generally.

The enclosed questionnaire is part of a doctoral study designed to provide reliable data for professional organizations, schools of education, and education publications to use in getting closer to meeting the needs of front-line educators.

In this state-wide study now almost completed, you are part of a group of department heads whose questionnaire responses for some reason were not part of the prime sample and who now constitute a critically important comparison sample.

I urgently need your confidential response to the enclosed, post-paid questionnaire. Please, please take the ten minutes necessary to complete it and then mail it off before the Christmas mail rush! If you have any concern about how the confidentiality of your responses will be protected --or any question about the study, please call me COLLECT days at 209-478-2552 or evenings and weekends at 209-477-2123.

Please also accept the extra stamp enclosed as a small thank-you for your consideration of my plea.

Cordially,

Jonathan Pearce
Lincoln Unified School District
(Stockton)

encls.

All Sources of Reported Change in Classroom Practice (N=549)

DEPARTMENTS	ENGLISH (n=125)			MATH (n=113)			PHYS ED (n=104			SCIENCE (n=89)			SOC SCI (n=94)			OTHERS (n=13)			ROW TOTALS		
	n	%1-8	%T	n	%1-8	%T	n	%1-8	%T	n	%1-8	%T	n	%1-8	%T	n	%1-8	%T	n	%1-8	%T
SOURCES																					
1. English Journals	20	48.8	8.2	0	0	0	0	0	0	0	0	0	1	4.8	.7	0	0	0	21	12.6	2.4
2. Math Journals	0	0	0	18	52.9	10.3	0	0	0	0	0	0	0	0	0	0	0	0	18	10.8	2.1
3. Phys Ed Journals	1	2.4	.4	1	2.9	.6	24	66.6	17.9	1	3.2	.7	0	0	0	1	25.	5.9	28	16.7	3.2
4. Science Journals	7	17.1	2.9	9	26.6	5.1	1	2.8	.8	26	83.9	17.3	2	9.5	1.3	1	25.	5.9	46	27.5	5.2
5. Soc Science Journals	1	2.4	.4	1	2.9	.6	0	0	0	0	0	0	11	52.4	7.4	0	0	0	13	7.8	1.5
6. Other Subj. Journals	1	2.4	.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	.6	.1
7. Gen'l. Ed. Journals	10	24.5	4.1	4	11.8	2.3	10	27.8	7.5	4	12.9	2.7	6	28.5	4.	2	50.	11.8	36	21.6	4.2
8. Gen'l. Int. Journals	1	2.4	.4	1	2.9	.6	1	2.8	.8	0	0	0	1	4.8	.7	0	0	0	4	2.4	.5
SUBTOTALS	41	100	16.8	34	100	24.9	36	100	27.0	31	100	20.7	21	100	14.1	4	100	23.6	167	100	19.2
Means:	0.328			0.301			0.346			0.348			0.223			0.308			0.310		
9. Other lit./media	4		1.7	5		2.9	3		2.2	9		6.	5		3.4	1		5.9	27		3.1
10. Educational Consult.	16		6.6	5		2.9	4		2.9	5		3.3	7		4.7	1		5.9	38		4.4
11. Profess'l. Assns.	13		5.4	9		5.1	4		2.9	8		5.3	8		5.3	1		5.9	43		5.
12. Colleagues/Studts.	78		32.2	76		43.4	47		35.2	66		44.	66		44.3	3		17.5	336		38.7
13. Ed.Profsls. Elsewhere	13		5.4	9		5.1	11		8.2	4		2.7	5		3.4	2		11.8	44		5.1
14. On-Site Inservice	77		31.8	37		21.1	29		21.6	27		18.	37		24.8	5		29.4	212		24.5
COLUMN TOTALS	242		100	175		100	134		100	150		100	149		100	17		100	867		100.
MEAN CHANGES	1.936			1.549			1.288			1.686			1.585			1.308			1.612		

APPENDIX P-1

Titles of Publications Reported

ENGLISH

AFI Journal
Basic Writing
Best Sellers
California English
California Speech Journal
College Composition and Communication
College English
Communication Education
English Journal
Etc.
Journal of Reading
Language Arts
Media and Methods
PMLA
Reading Teacher
Slate
Sunburst
Sunspots
The Writer
Writer's Digest
CCCTE Newsletter
CATE Journal
English 300 Newsletter
Research in the Teaching of English
NCTE Bulletin
English Teacher
California Reader
Bay Area Writers Publication
Western Speech
Dramatics
English Teacher
Elementary English
Theatre Crafts
Quill and Scroll

MATHEMATICS

Abacus
Arithmetic Teacher
Byte
California Math Teacher
CMC Journal
Compute
Computer Using Educators
Computing Teacher
Communicator
Creative Computing
Data Communications
Journal for Research in Mathematics Education
Journal of the California Mathematics Council
Mathematics
Mathematics Research Journal
Mathematics Teacher
Microcomputing 80
Output
Personal Computing
Recreational Computing
School Science and Math
American Mathematics Monthly
Math for the Two-Year College
NCTM Journal
Parameters
California Math Council Journal

APPENDIX P-2

Titles of Publications Reported

PHYSICAL EDUCATION

AAHPERD Journal
Athlete and Coach
Athletic Director
Athletic Journal
Athletic Purchasing and Equipment
CAHPERD Journal
Cal Coach
Coaching
Coaching Womens Athletics
Collegiate Baseball
Dance
First Aider
First Aid Trainer
Fitness
Games
Golf Digest
Gymnastic International
Journal of Health, PE, Recreation and Dance
Journal of Physical Eduation
Journal of U.S. Track Coaches
Medalist
Medicine and Science in Sports
National Strength Coaches Journal
New Methods in Physical Ed.
Physical Education Today
Physical Educator
Physician and Sports Medicine
Runner
Runner's World
Running
Running World
Scholastic Athlete
Scholastic Coach
Soccer World
Sports Afield
Sports Illustrated
Sports Technique
Tennis USA
Tennis World
Track and Field News
Track Technique
Volleyball
Women's Coach
Women's Coaching Clinic
Women's Sports
Women's Varsity Sports
Young Athlete
Weight and Strength
Athletic Coach
Sports Ness
Coach and Athlete
Girls and Womens Sports
Tennis
Bulletin of the National Association of Basketball Coaches
Gymnastics
Coach
Cramer
Health
US Tennis

APPENDIX P-3

Titles of Publications Reported

SCIENCE

American Biology Teacher
American Naturalist
American Scientist
Analytical Chemistry
Annual Review of Nuclear and Particle Physics
Astronomy
Audio
Audio Amateur
Audubon
Biological Abstracts
Biology Digest
Bioscience
California Native Plants
Carolina Tips
Chemecology
Chemical Earnings
Chemistry
Chemistry and Engineering News
Chem 13 News
Chromatographic Science
Current Science
Electronic Technician
Environment
Fusion
Horticulture
Journal of Chemical Education
Journal of General Microbiology
Jouranl of Mammalogy
National Wildlife
Natural History
Oceanus
Pacific Horticulture
Physics Today
Phytopathology
Popular Electronics
Popular Science
Science
Science 80
Science and Children
Science and Engineering
Science Digest
Science Teacher
Science World
Scientific American
SciQuest
Sky and Telescope
Southern California Botanist
Star and Telescope
BSCS Bulletin
Biology Teacher
Physics Teacher
Pacific Discovery
Oceans
NSTA Journal
Chemistry Teacher
NSSA Journal
American Journal of Physics
Medical World News
Harvard Medical School News
Chemical Education
Ecology
Small Animal Clinician
Journal of American Foresters

APPENDIX P-4

Titles of Publications Reported

SOCIAL SCIENCE

Africa
Americana
American Anthropologist
American Historical Journal
American Historical Quarterly
American History Illustrated
California Historical Bulletin
California Social Science Rev.
California Social Studies Rev.
Center Magazine
Civil War Illustrated
Current History
Foreign Affairs
Historical Events
History Teacher
Journal of Experimental Psych
Journal of Psychology
Journal of San Diego History
Marin Historical Bulletin
Middle East Notebook
National Geographic
National Review
NEA Teacher
Pacific Historian
Psychology Today
Political Science Review
Social Education
Social Studies Review
Teaching History
Wilson Quarterly
National Council for Social Studies Journal
Social Science Journal
Southern California History
U.S. History Illustrated
American West
Far Westerner

OTHER CURRICULUM JOURNALS

Aviation Education News
Balance Sheet
Bandwagon
Business Education Forum
Business Exchange
Changing Times
Hispania
Journal of Game Management
Journal of Traffic Safety Education
MENC Journal
Modern Language Journal
Music Education
Phi Lambda Theta Journal
Prime Time
Today's Secretary
Business Teacher
Instrumentalist
Humanities Journal
School Shop
Business Education
School Library Journal
Wilson's Library Journal
Business Education World

APPENDIX P-5

Titles of Publications Reported

GENERAL EDUCATION JOURNALS (NOT DEPARTMENT-SPECIFIC)

American Educator
American School Board Journal
American Woman Graduate
CAG Newsletter
Clearing House
CTA Action
Delta Kappa Gamma Bulletin
Education Digest
Educational Leadership
Journal for Two-Year Colleges
Harvard Educational Review
Journal of Education
Journal of National Assessment
Journal of Popular Culture
Learning
Perceptual and Motor Skills
Phi Beta Kappan
Phi Delta Kappan
Phi Kappa Phi Journal
Research Quarterly
School and Society
Technological Horizons in Education
Technology Review
Teacher
THE Journal
Thrust
Today's Education
AFT Magazine
CTA Journal
NEA Journal
Education Journal
BME Journal
NASSP Bulletin
Educational Forum
Review of Educational Research
American Educational Research Journal
CEDR Quarterly
Chronicle of Higher Education
Woman Graduate
ITAA Journal

GENERAL INTEREST PUBLICATIONS

ACLU News
Afterlife Communications
Atlantic
California Fish and Game
Coevolution Quarterly
Consumer Reports
CQ
D.C. Heath Newsletter
Department of State Bulletin
Family Circle
Family Health
Freeman
Harpers
High Fidelity
In Common
Mad
Master Teacher Series
Newsweek
New West
New Yorker
Omni
Oracle
Perspective
Population Reference Bureau
Redbook
Saturday Review
Smithsonian
Spectator
Time
U.S. News
Wall Street Journal
World Research, Inc.
Ladies Home Journal
Good Housekeeping
California Journal
Iowa Alumni Perspective
Arizona
Pipeline
Los Angeles Times
Santa Ana Register
Sunset
Backpacker
Popular Mechanics
Mother's Magazine
Stereo Review

APPENDIX Q-1

Professional Association Memberships Reported

ENGLISH

San Mateo County Reading Association
Southern California Association of Teachers of English
Southern California Educational Theatre Association
English Council of Los Angeles
Association of Secondary Reading Teachers
American Association of English Teachers
Sacramento Area Reading Association
Bay Area Writers Project
NAJE
AFI
ARTA
California Association of Teachers of English
California Conference on English Education
California Council for Teachers of English
California Reading Association
Central California Association of Teachers of English
English Council of Los Angeles
English 300 Society
International Reading Association
Journalism Educators Association of Northern California
National Council of Teachers of English

MATHEMATICS

Orange County Mathematics Association
Santa Clara Valley Math Association
Minnesota Teachers of Math
Alameda County Math Educators
American Mathematics Association
AC^{3}ME
California Mathematics Council
California Teachers of Mathematics
Computer Using Educators
Mathematics Association of America
Mt. Lassen Mathematics Association
National Council of Teachers of Mathematics

APPENDIX Q-2

Professional Association Memberships Reported

PHYSICAL EDUCATION

National Strength Coaches Association
Northern California Gymnastics Coaches Association
PAT
President's Fitness Council
Southern California Football Coaches Association
Strength Coaches of America
U.S. Track Coaches Association
National Association of Basketball Coaches
NAADT
U.S. Field Hockey Association
U.S. Tennis Association
American Association of College Basketball Coaches
American Alliance of Health, Physical Education, Recreation, and Dance
American Badminton Association
American Football Coaches Association
American Swim Coaches Association
California Association for Health, Physical Education, Recreation, and Dance
California Association of Directors of Athletics
California Coaches Association
California State Athletic Directors Association
California Women Coaches Academy
Collegiate Baseball Coaches
National Football Coaches Association
National Interscholastic Athletic Administrators Association
National Interscholastic Swim Coaches Association
National Jogging Association

SCIENCE

National Science Teachers Association
National Wildlife Association
Natural History Museum Alliance
Northern California Association of Physics Teachers
Oceanic Society
Orange County Chemistry Teachers
Southern California Botanists
Society for General Microbiology
American Biology Teachers Association
California Association of Chemistry Teachers
American Veterinary Medicine Association
Beta Beta Beta
American Association for the Advancement of Science
American Association of Physics Teachers
American Chemical Society
American Meteorological Society
American Photographers Institute
American Phytopathological Association
American Scientific Association
ARRL Radio
California Association of Chemistry Teachers
California Botanical Association
California Native Plant Society
California Science Teachers Association
Central California Science Teachers Association
FGBMFI
National Association of Biology Teachers
National Science Association
National Science Supervisors Association

APPENDIX Q-3

Professional Association Memberships Reported

SOCIAL SCIENCE

North Coast Social Science Organization
San Joaquin County Historical Society
Santa Clara County Counsel for the Social Studies
San Diego Historical Society
Social Studies Council of California
Society for History Education
Southern California Council for the Social Studies
Southern California Historical Society
Westerners
Western Historical Association
Academy of Social Science
Academy of Political Science
Orange County Social Science Teachers Association
American Museum of Natural History
National Association of Social Studies Teachers
American Anthropological Association
American Historical Association
American Psychological Association
American Society for Legal History
Asia Foundation
California Association of Social Educators
California high School Psychology Teachers
California Historical Society
California Society for the Social Sciences
Inland Empire Council for the Social Studies
Marin Historical Society
Montana Historical Society
National Council for the Social Studies

OTHER SUBJECT-MATTER ORGANIZATIONS

Theta Alpha Delta
Tri-County Foreign Language Association
Prime Time
Southern California School Band and Orchestra Directors
California Band Directors Association
Phi Lambda Theta
Humanities Association of California
American Accounting Association
American Association of Teachers of French
American Association of Teachers of Spanish and Portuguese
California Association of Work Experience Educators
California Business Education Association
California Music Educators Association
DECUS
Foreign Language Association of Greater Sacramento
Music Educators National Conference
National Business Educators Association

APPENDIX Q-4

Professional Association Memberships Reported

GENERAL EDUCATION OR EDUCATION-RELATED

Outstanding Women Educators
Phi Delta Kappa
Phi Kappa Phi
San Diego Association for the Gifted
American Educational Research Association
National Council of Measurement in Education
Phi Beta Kappa
American Association of University Women
Association for Supervision and Curriculum Development
California Association for the Gifted
California Association of School Board Members
California Secondary Schools Association
Delta Kappa Gamma
National Association of Professional Educators
National Educators Fellowship

EDUCATOR-ADVOCACY

Retired Teachers Association
American Federation of Teachers
Association of California School Administrators
California Federation of Teachers
California Teachers Association
National Association of Secondary School Principals
National Education Association

OTHER REPORTED ORGANIZATIONS

Naval Institute
American Rifle Association
Air Force Association
American Civil Liberties Union
International Transactional Analysis Association
Mensa